METHODS FOR PRICING THE TECHNICAL COMPONENT OF DIAGNOSTIC TESTS

by

Mark V. Pauly, Project Director
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Volume 2 of 2

Appendices

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Appendix A

Diagnostic Test Mean Charges

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TABLE 2-1

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND LOCATION
(FREQUENCY IN PARENTHESIS)
TEST: CHEST X-RAY (SINGLE VIEW) *

	OFFICE CHARGES		HOSPITAL CHARGES		DIFFERENTIALS	
	(1)	(2)	(3)	(4)	(1) - (3)	(1) - (4)
SPECIALTY	GLOBAL	PROF COMP	GLOBAL	PROF COMP		
CLINIC, GROUP PRACTICE EX	$26.78 (72330)	$15.98 (7981)	$9.04 (271612)	$11.19 (142643)	$17.73	$15.59
RADIOLOGY	$20.46 (157644)	$12.18 (39751)	$11.01 (2997043)	$11.01 (4950637)	$9.45	$9.45
INTERNAL MEDICINE	$27.51 (374402)	$14.24 (4728)	$10.53 (3423)	$9.29 (14725)	$16.98	$18.22
GENERAL PRACTICE	$23.99 (133919)	$11.35 (1289)	$8.10 (20473)	$8.78 (10476)	$15.88	$15.21
TOTAL	$25.57 (1017139)	$12.98 (57488)	$10.81 (3363130)	$11.01 (5163247)	$14.76	$14.56

* HCPCS CODES: 71010, 71015

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-1

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND LOCATION
(FREQUENCY IN PARENTHESIS)
TEST: CHEST X-RAY (TWO VIEWS) *

	OFFICE CHARGES		HOSPITAL CHARGES		DIFFERENTIALS	
	(1)	(2)	(3)	(4)	(1) - (3)	(1) - (4)
SPECIALTY	GLOBAL	PROF COMP	GLOBAL	PROF COMP		
CLINIC, GROUP PRACTICE EX	$37.60 (338903)	$29.03 (30574)	$12.18 (296988)	$13.90 (120363)	$25.42	$23.70
RADIOLOGY	$36.66 (981844)	$16.98 (72613)	$14.26 (2908343)	$13.97 (4971780)	$22.40	$22.69
INTERNAL MEDICINE	$35.13 (1148452)	$23.40 (6387)	$14.72 (3943)	$11.85 (15672)	$20.41	$23.28
FAMILY PRACTICE	$33.37 (362770)	$26.96 (9032)	$10.07 (6314)	$12.25 (3339)	$23.29	$21.11
TOTAL	$35.64 (3611720)	$21.01 (123083)	$14.01 (3298694)	$13.95 (5170149)	$21.62	$21.69

* HCPCS CODES: 71020, 71021, 71022, 71023, 71030, 71034, 71035

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-1

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND LOCATION
(FREQUENCY IN PARENTHESIS)
TEST: ROUTINE EKG W/ 12 LEADS *

	OFFICE CHARGES		HOSPITAL CHARGES		DIFFERENTIALS	
	(1)	(2)	(3)	(4)	(1) - (3)	(1) - (4)
SPECIALTY	GLOBAL	PROF COMP	GLOBAL	PROF COMP		
CLINIC, GROUP PRACTICE EX	$33.77 (419869)	$21.17 (1587)	$11.73 (43231)	$12.07 (60888)	$22.04	$21.70
INTERNAL MEDICINE	$31.89 (3861605)	$18.39 (1086)	$12.68 (40573)	$13.20 (14581)	$19.21	$18.69
FAMILY PRACTICE	$30.34 (831297)	$18.43 (290)	$17.14 (2771)	$15.29 (866)	$13.19	$15.04
CARDIOVASCULAR DISEASE	$33.07 (1505362)	$18.71 (1684)	$8.96 (470759)	$8.97 (51620)	$24.11	$24.10
GENERAL PRACTICE	$30.41 (756038)	$19.12 (273)	$11.89 (10369)	$13.24 (1637)	$18.52	$17.17
TOTAL	$31.98 (7823585)	$19.40 (5106)	$9.61 (577674)	$11.02 (131752)	$22.37	$20.96

* HCPCS CODES: 93000

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-1

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND LOCATION
(FREQUENCY IN PARENTHESIS)
TEST: HOLTER MONITOR *

	OFFICE CHARGES		HOSPITAL CHARGES		DIFFERENTIALS	
	(1)	(2)	(3)	(4)	(1) - (3)	(1) - (4)
SPECIALTY	GLOBAL	PROF COMP	GLOBAL	PROF COMP		
CLINIC, GROUP PRACTICE EX	$195.85 (17919)	$63.65 (300)	$52.66 (23086)	$37.99 (34743)	$143.19	$157.86
INTERNAL MEDICINE	$198.02 (146232)	$71.69 (1666)	$67.15 (32552)	$53.15 (40616)	$130.88	$144.88
FAMILY PRACTICE	$205.24 (34907)	$53.27 (207)	$66.23 (1011)	$56.02 (1202)	$139.01	$149.22
CARDIOVASCULAR DISEASE	$205.78 (103534)	$79.27 (2217)	$66.92 (54288)	$58.84 (60595)	$138.86	$146.93
TOTAL	$202.05 (346202)	$71.12 (4886)	$64.69 (121556)	$52.23 (140913)	$137.36	$149.82

* HCPCS CODES: 93258, 93259, 93262, 93263

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-1

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND LOCATION
(FREQUENCY IN PARENTHESIS)
TEST: REAL TIME EKG MONITOR *

	OFFICE CHARGES		HOSPITAL CHARGES		DIFFERENTIALS	
	(1)	(2)	(3)	(4)	(1) - (3)	(1) - (4)
SPECIALTY	GLOBAL	PROF COMP	GLOBAL	PROF COMP		
CLINIC, GROUP PRACTICE EX	$159.19 (255)	$65.00 (7)	$36.25 (8)	. 0	$122.94	.
INTERNAL MEDICINE	$161.76 (5187)	$66.08 (787)	$94.32 (1942)	$51.51 (8879)	$67.44	$110.24
CARDIOVASCULAR DISEASE	$241.00 (103)	$35.00 (5)	$182.00 (11)	$44.11 (56)	$59.00	$196.89
GENERAL PRACTICE	$156.08 (931)	$55.19 (27)	$55.50 (244)	$41.02 (123)	$100.58	$115.06
TOTAL	$162.70 (6812)	$65.45 (836)	$90.20 (2227)	$51.33 (9193)	$72.49	$111.37

* HCPCS CODES. 91266

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-1

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND LOCATION
(FREQUENCY IN PARENTHESIS)
TEST: SPIROMETRY *

	OFFICE CHARGES		HOSPITAL CHARGES		DIFFERENTIALS	
	(1)	(2)	(3)	(4)	(1) - (3)	(1) - (4)
SPECIALTY	GLOBAL	PROF COMP	GLOBAL	PROF COMP		
CLINIC, GROUP PRACTICE EX	$41.56 (32630)	$34.62 (1713)	$21.63 (18125)	$17.79 (13977)	$19.93	$23.76
PULMONARY DISEASE	$42.43 (101605)	$21.99 (2990)	$20.25 (56927)	$20.21 (64271)	$22.17	$22.22
INTERNAL MEDICINE	$40.67 (294867)	$21.52 (2718)	$21.89 (25518)	$19.35 (49154)	$18.78	$21.32
FAMILY PRACTICE	$40.72 (72219)	$30.07 (97)	$22.20 (892)	$21.58 (460)	$18.52	$19.15
GENERAL PRACTICE	$47.89 (72953)	$28.33 (203)	$16.60 (1903)	$16.65 (1660)	$31.29	$31.24
TOTAL	$42.12 (670273)	$24.86 (7949)	$21.06 (112487)	$19.54 (140147)	$21.06	$22.58

* HCPCS CODES: 94010, 94060, 94070

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-1

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND LOCATION
(FREQUENCY IN PARENTHESIS)
TEST: NON-INV PER VASCULAR *

SPECIALTY	OFFICE CHARGES (1) GLOBAL	(2) PROF COMP	HOSPITAL CHARGES (3) GLOBAL	(4) PROF COMP	DIFFERENTIALS (1) - (3)	(1) - (4)
CLINIC, GROUP PRACTICE EX	$96.99 (25097)	$34.90 (879)	$44.95 (37070)	$27.13 (26622)	$52.05	$69.86
THORACIC SURGERY	$99.82 (47271)	$57.59 (920)	$46.28 (20698)	$42.46 (22733)	$53.55	$57.36
INTERNAL MEDICINE	$102.75 (58889)	$51.07 (523)	$44.05 (12926)	$28.00 (17906)	$58.69	$74.74
CARDIOVASCULAR DISEASE	$109.10 (36540)	$61.85 (383)	$40.90 (35372)	$46.00 (17418)	$68.20	$63.10
GENERAL SURGERY	$89.75 (104016)	$48.98 (2901)	$39.15 (56657)	$36.85 (55301)	$50.61	$52.90
TOTAL	$103.27 (405143)	$50.93 (8988)	$44.37 (199812)	$38.85 (190999)	$58.90	$64.43

* HCPCS CODES: 93850, 93860, 93890, 93910, 93950, 93960

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-1

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND LOCATION
(FREQUENCY IN PARENTHESIS)
TEST: ORTHO X-RAY (PELVIS) *

	OFFICE CHARGES		HOSPITAL CHARGES		DIFFERENTIALS	
	(1)	(2)	(3)	(4)	(1) - (3)	(1) - (4)
SPECIALTY	GLOBAL	PROF COMP	GLOBAL	PROF COMP		
CLINIC, GROUP PRACTICE EX	$32.55 (14462)	$20.71 (1392)	$9.82 (14646)	$13.61 (7043)	$22.73	$18.94
RADIOLOGY	$33.58 (60375)	$13.30 (4102)	$13.25 (162119)	$13.04 (289662)	$20.34	$20.54
ORTHOPEDIC SURGERY	$31.33 (161077)	$17.13 (844)	$44.71 (323)	$14.35 (687)	Z	$16.98
INTERNAL MEDICINE	$30.41 (29770)	$17.03 (189)	$12.21 (200)	$11.01 (1117)	$18.20	$19.40
TOTAL	$31.53 (298542)	$15.57 (6809)	$12.93 (184004)	$13.04 (301652)	$18.59	$18.48

* HCPCS CODES: 72170, 72180, 72190

NOTE: Z REPLACES NEGATIVE VALUES DUE TO HIGH HOSPITAL CHARGES FOR X-RAYS IN ORTHOPEDIC SURGERY (SEE EXPLANATION IN THE EXECUTIVE SUMMARY, PAGE 5).

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-1

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND LOCATION
(FREQUENCY IN PARENTHESIS)
TEST: ORTHO X-RAY (SHOULDER) *

SPECIALTY	OFFICE CHARGES (1) GLOBAL	(2) PROF COMP	HOSPITAL CHARGES (3) GLOBAL	(4) PROF COMP	DIFFERENTIALS (1) - (3)	(1) - (4)
CLINIC, GROUP PRACTICE EX	$34.04 (25110)	$26.84 (2010)	$11.61 (11419)	$12.42 (5947)	$22.44	$21.62
RADIOLOGY	$35.05 (71009)	$14.44 (3998)	$12.95 (134522)	$13.33 (219394)	$22.11	$21.72
ORTHOPEDIC SURGERY	$32.91 (182783)	$15.98 (1008)	$18.76 (423)	$14.59 (656)	$14.15	$18.32
INTERNAL MEDICINE	$32.60 (38996)	$15.61 (261)	$11.97 (192)	$10.49 (802)	$20.63	$22.11
TOTAL	$32.94 (383879)	$18.10 (7796)	$12.88 (151805)	$13.29 (229405)	$20.07	$19.66

* HCPCS CODES: 73020, 73030

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-1

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND LOCATION
(FREQUENCY IN PARENTHESIS)
TEST: ORTHO X-RAY (HIP) *

	OFFICE CHARGES		HOSPITAL CHARGES		DIFFERENTIALS	
	(1)	(2)	(3)	(4)	(1) - (3)	(1) - (4)
SPECIALTY	GLOBAL	PROF COMP	GLOBAL	PROF COMP		
CLINIC, GROUP PRACTICE EX	$39.34 (37804)	$30.01 (3390)	$14.23 (28398)	$15.42 (14087)	$25.11	$23.92
RADIOLOGY	$40.33 (120715)	$16.98 (9278)	$14.80 (370087)	$15.60 (573442)	$25.53	$24.74
ORTHOPEDIC SURGERY	$36.94 (414430)	$19.37 (1358)	$22.01 (1990)	$18.19 (2311)	$14.93	$18.75
INTERNAL MEDICINE	$37.42 (37121)	$26.63 (331)	$13.70 (441)	$11.99 (1798)	$23.72	$25.43
TOTAL	$37.46 (680082)	$20.52 (14949)	$14.74 (412361)	$15.58 (598518)	$22.72	$21.88

* HCPCS CODES: 73500, 73510, 73520

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-1

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND LOCATION
(FREQUENCY IN PARENTHESIS)
TEST: ORTHO X-RAY (KNEE) *

	OFFICE CHARGES		HOSPITAL CHARGES		DIFFERENTIALS	
	(1)	(2)	(3)	(4)	(1) - (3)	(1) - (4)
SPECIALTY	GLOBAL	PROF COMP	GLOBAL	PROF COMP		
CLINIC, GROUP PRACTICE EX	$33.78 (49336)	$13.28 (1262)	$11.75 (17746)	$12.85 (9792)	$22.03	$20.93
RADIOLOGY	$33.99 (127859)	$13.90 (7513)	$13.03 (227464)	$13.13 (345673)	$20.96	$20.86
ORTHOPEDIC SURGERY	$31.96 (479920)	$15.74 (1970)	$20.61 (1187)	$13.59 (1237)	$11.35	$18.37
INTERNAL MEDICINE	$31.25 (72237)	$20.20 (834)	$7.45 (788)	$10.07 (1049)	$23.80	$21.18
TOTAL	$32.06 (831736)	$14.82 (12497)	$12.91 (253770)	$13.10 (361934)	$19.16	$18.96

* HCPCS CODES: 73560, 73562, 73564

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-1

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND LOCATION
(FREQUENCY IN PARENTHESIS)
TEST: ORTHO X-RAY (FOOT) *

	OFFICE CHARGES		HOSPITAL CHARGES		DIFFERENTIALS	
	(1)	(2)	(3)	(4)	(1) - (3)	(1) - (4)
SPECIALTY	GLOBAL	PROF COMP	GLOBAL	PROF COMP		
CLINIC, GROUP PRACTICE EX	$30.93 (24926)	$24.66 (1433)	$10.71 (10874)	$11.80 (6019)	$20.22	$19.14
PODIATRY SURGICAL CHIRO	$29.88 (533411)	$20.09 (2200)	$22.10 (2090)	$12.03 (1136)	$7.78	$17.85
RADIOLOGY	$31.06 (57395)	$13.11 (3965)	$11.79 (123941)	$12.53 (192239)	$19.27	$18.53
ORTHOPEDIC SURGERY	$29.22 (151687)	$15.21 (776)	$15.13 (298)	$13.29 (402)	$14.09	$15.93
TOTAL	$29.60 (861543)	$17.14 (9089)	$11.81 (142001)	$12.49 (202946)	$17.79	$17.11

* HCPCS CODES: 73620, 73630

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-1

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND LOCATION
(FREQUENCY IN PARENTHESIS)
TEST: OPTHAL BIOMETRY BY ULTRA-BIL *

	OFFICE CHARGES		HOSPITAL CHARGES		DIFFERENTIALS	
	(1)	(2)	(3)	(4)	(1) - (3)	(1) - (4)
SPECIALTY	GLOBAL	PROF COMP	GLOBAL	PROF COMP		
CLINIC, GROUP PRACTICE EX	$127.96 (7521)	$75.04 (54)	$79.86 (208)	$96.85 (136)	$48.10	$31.11
RADIOLOGY	$100.28 (414)	$64.11 (9)	$44.91 (447)	$43.67 (1957)	$55.37	$56.61
OPTHAMOLOGY	$132.97 (519722)	$78.49 (3335)	$81.65 (13472)	$73.32 (8578)	$51.31	$59.65
OPTHAMOLOGY, OTOL, RHINO	$137.95 (3688)	. 0	$60.60 (228)	$59.15 (46)	$77.36	$78.80
TOTAL	$132.83 (534757)	$78.35 (3418)	$79.87 (14490)	$67.59 (10964)	$52.96	$65.24

* HCPCS CODES: 76516

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-1

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND LOCATION
(FREQUENCY IN PARENTHESIS)
TEST: CAT SCAN OF HEAD *

	OFFICE CHARGES		HOSPITAL CHARGES		DIFFERENTIALS	
	(1)	(2)	(3)	(4)	(1) - (3)	(1) - (4)
SPECIALTY	GLOBAL	PROF COMP	GLOBAL	PROF COMP		
CLINIC, GROUP PRACTICE EX	$294.03 (12668)	$119.03 (1861)	$87.62 (52670)	$85.58 (16026)	$206.42	$208.45
RADIOLOGY	$286.84 (88928)	$95.14 (9085)	$85.35 (514687)	$93.11 (839646)	$201.50	$193.73
NEUROLOGICAL SURGERY	$276.59 (3966)	$86.30 (477)	$116.14 (983)	$89.08 (2504)	$160.45	$187.51
NEUROLOGY	$305.83 (12982)	$81.40 (1692)	$104.20 (5539)	$82.51 (14063)	$201.63	$223.32
TOTAL	$289.30 (122984)	$96.81 (13422)	$85.84 (586896)	$92.63 (882026)	$203.46	$196.67

* HCPCS CODES: 70450, 70460, 70470

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-1

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND LOCATION
(FREQUENCY IN PARENTHESIS)
TEST: ECHOGRAPHY *

SPECIALTY	OFFICE CHARGES (1) GLOBAL	(2) PROF COMP	HOSPITAL CHARGES (3) GLOBAL	(4) PROF COMP	DIFFERENTIALS (1) - (3)	(1) - (4)
CLINIC, GROUP PRACTICE EX	$118.37 (14266)	$47.15 (792)	$52.29 (25061)	$50.17 (11678)	$66.08	$68.20
ROENTGEN, RADIOL (OSTEO)	$139.87 (1710)	. 0	$56.59 (5406)	$40.04 (905)	$83.28	$99.83
RADIOLOGY	$117.83 (119883)	$54.70 (4948)	$45.92 (324158)	$48.64 (520583)	$71.91	$69.20
INTERNAL MEDICINE	$127.43 (20190)	$61.52 (244)	$51.13 (908)	$46.87 (3057)	$76.30	$80.56
TOTAL	$120.68 (187178)	$54.74 (6613)	$46.49 (358941)	$48.62 (544355)	$74.18	$72.06

* HCPCS CODES: 76700, 76705

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-1

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND LOCATION
(FREQUENCY IN PARENTHESIS)
TEST: UPPER GI X-RAY *

SPECIALTY	OFFICE CHARGES (1) GLOBAL	(2) PROF COMP	HOSPITAL CHARGES (3) GLOBAL	(4) PROF COMP	DIFFERENTIALS (1) - (3)	(1) - (4)
CLINIC, GROUP PRACTICE EX	$87.27 (27289)	$52.32 (675)	$32.51 (28569)	$32.49 (9939)	$54.76	$54.78
RADIOLOGY	$89.67 (189583)	$40.19 (5077)	$33.59 (330374)	$33.88 (579151)	$56.07	$55.79
INTERNAL MEDICINE	$81.33 (27402)	$44.01 (124)	$27.96 (203)	$18.92 (5055)	$53.37	$62.42
GENERAL PRACTICE	$72.67 (6412)	$39.79 (58)	$14.27 (2249)	$27.60 (1451)	$58.40	$45.08
TOTAL	$87.45 (275767)	$41.64 (6111)	$33.35 (367562)	$33.71 (600340)	$54.10	$53.74

* HCPCS CODES: 74240, 74241, 74245

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-2.1

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: CHEST X-RAY (1 SIDE)
HCPA CODES: 71010, 71015
SPECIALTY: RADIOLOGY

Region	Office Charges (1) Global	Office Charges (2) Professional Only	Hospital Charges (3) Global	Hospital Charges (4) Professional Only	Differentials (1)-(3)	Differentials (1)-(4)
Boston	$24.62 (2891)	$11.37 (740)	$ 8.36 (35273)	$11.58 (482679)	$16.26	$13.03
New York	$25.39 (20118)	$12.63 (5905)	$13.85 (52331)	$11.49 (942869)	$11.54	$13.90
Philadelphia	$24.28 (12678)	$13.11 (10007)	$11.65 (670086)	$10.97 (390687)	$12.63	$13.31
Atlanta	$21.73 (19211)	$12.21 (4322)	$10.05 (212685)	$10.97 (1134819)	$11.68	$10.76
Chicago	$16.45 (61059)	$10.88 (6789)	$11.22 (1206106)	$ 8.65 (228650)	$ 5.23	$ 7.80
Dallas	$19.34 (14060)	$10.58 (3239)	$10.69 (438670)	$10.90 (493595)	$ 8.65	$ 8.44
Kansas City	$18.14 (6662)	$10.89 (54)	$10.64 (122312)	$ 9.24 (253402)	$ 7.50	$ 8.90
Denver	$21.81 (3462)	$11.85 (1333)	$ 9.69 (25903)	$10.20 (30047)	$12.12	$11.61
San Francisco	$26.65 (13628)	$12.87 (6476)	$ 9.93 (175542)	$11.75 (864025)	$16.72	$14.90
Seattle	$21.40 (3875)	$10.60 (886)	$ 8.97 (58135)	$ 9.29 (129864)	$12.43	$12.11
National Total	$20.46 (157644)	$12.18 (39751)	$11.01 (2997043)	$11.01 (4950637)	$ 9.45	$ 9.45

NOTES: 1. -- represents missing values in a HCFA region
* represents zero allowed services in a HCFA region
2. For some HCFA regions for which the mean hospital charges were calculated on very small samples, the derived technical differential is not very meaningful. Missing values replaced negative values for the technical differential.

TABLE 2-2.2

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: CHEST X-RAY (1 SIDE)
HCFA CODES: 71010, 71015
SPECIALTY: CLINIC, GROUP PRACTICE

	Office Charges		Hospital Charges		Differentials	
	(1)	(2)	(3)	(4)	(1)-(3)	(1)-(4)
		Professional		Professional		
Region	Global	Only	Global	Only		
Boston	$27.03 (3170)	$12.29 (2196)	$15.00 (1)	$11.45 (44555)	$12.03	$15.58
New York	$36.48 (9162)	$12.89 (88)	$10.50 (4)	$12.18 (34367)	$25.98	$24.30
Philadelphia	$26.31 (4346)	$12.70 (33)	$ 6.90 (10332)	$11.10 (3083)	$19.41	$15.21
Atlanta	$24.06 (6208)	$11.83 (12)	$12.88 (40)	$11.67 (2220)	$11.19	$12.39
Chicago	$25.00 (25323)	$19.36 (4192)	$ 8.89 (230208)	$ 9.54 (9171)	$16.11	$15.47
Dallas	$25.72 (233)	$13.50 (2)	$10.48 (4822)	$10.25 (156)	$15.24	$15.47
Kansas City	$24.16 (13072)	. (0)	$ 7.65 (2771)	$ 8.65 (14992)	$16.51	$15.51
Denver	$21.06 (64)	$ 1.00 (1)	. (0)	$ 4.88 (124)	.	$16.18
San Francisco	$27.90 (10030)	$12.23 (1406)	$11.34 (23064)	$11.54 (31294)	$16.56	$16.36
Seattle	$23.46 (722)	$ 8.80 (51)	$ 9.49 (370)	$ 9.80 (2681)	$13.97	$13.66
National Total	$26.78 (72330)	$15.98 (7981)	$ 9.04 (271612)	$11.19 (142643)	$17.73	$15.59

TABLE 2-2.3

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: CHEST X-RAY (2 SIDES)
HCFA CODES: 71020, 71021, 71022, 71023, 71030, 71034, 71035
SPECIALTY: INTERNAL MEDICINE

	Office Charges		Hospital Charges		Differentials	
	(1)	(2)	(3)	(4)	(1)-(3)	(1)-(4)
		Professional		Professional		
Region	Global	Only	Global	Only		
Boston	$36.46 (32228)	$19.60 (15)	$20.67 (6)	$14.21 (70)	$15.79	$22.25
New York	$41.55 (155981)	$16.12 (2309)	$32.85 (13)	$15.54 (819)	$ 8.70	$26.01
Philadelphia	$35.01 (85819)	$17.05 (270)	$14.93 (1932)	$10.04 (1699)	$20.08	$24.97
Atlanta	$32.52 (272513)	$13.04 (363)	$16.56 (95)	$13.63 (908)	$15.96	$18.89
Chicago	$31.22 (133140)	$35.98 (2285)	$15.13 (586)	$11.42 (124)	$16.09	$19.80
Dallas	$33.63 (166543)	$13.89 (682)	$12.65 (585)	$13.25 (786)	$20.98	$20.38
Kansas City	$33.86 (73257)	$18.95 (20)	$15.09 (399)	$11.36 (9275)	$18.78	$22.50
Denver	$33.19 (40477)	$17.36 (36)	$16.53 (59)	$12.31 (1345)	$16.66	$20.88
San Francisco	$40.06 (129690)	$26.73 (244)	$11.83 (132)	$15.25 (455)	$28.23	$24.81
Seattle	$34.82 (58804)	$20.61 (163)	$16.58 (136)	$ 9.86 (191)	$18.24	$24.96
National Total	$35.13 (1148452)	$23.40 (6387)	$14.72 (3943)	$11.85 (15672)	$20.41	$23.28

TABLE 2-2.4

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: CHEST X-RAY (2 SIDES)
HCFA CODES: 71020, 71021, 71022, 71023, 71030, 71034, 71035
SPECIALTY: RADIOLOGY

Region	Office Charges (1) Professional Global	Office Charges (2) Professional Only	Hospital Charges (3) Professional Global	Hospital Charges (4) Professional Only	Differentials (1)-(3)	Differentials (1)-(4)
Boston	$38.44 (80992)	$14.66 (3351)	$12.62 (41759)	$14.73 (595752)	$25.82	$23.71
New York	$41.75 (123427)	$15.82 (4935)	$17.82 (46591)	$13.95 (888394)	$23.93	$27.80
Philadelphia	$38.16 (108832)	$17.83 (6087)	$16.01 (702258)	$15.08 (441636)	$22.14	$23.08
Atlanta	$31.81 (133856)	$13.53 (17518)	$13.78 (263422)	$13.15 (1294847)	$18.03	$18.66
Chicago	$31.89 (121045)	$21.86 (18006)	$13.08 (921371)	$12.52 (196969)	$18.80	$19.37
Dallas	$33.23 (110276)	$13.26 (8772)	$14.21 (464464)	$13.75 (447017)	$19.02	$19.47
Kansas City	$32.88 (38016)	$15.48 (71)	$13.92 (241856)	$11.92 (271788)	$18.96	$20.95
Denver	$32.08 (12922)	$13.80 (767)	$13.89 (33206)	$11.64 (47438)	$18.19	$20.44
San Francisco	$40.79 (201591)	$19.46 (10057)	$14.65 (130733)	$15.88 (640834)	$26.14	$24.92
Seattle	$37.45 (50887)	$14.08 (3049)	$13.41 (62683)	$13.72 (147105)	$24.04	$23.73
National Total	$36.66 (981844)	$16.98 (72613)	$14.26 (2908343)	$13.97 (4971780)	$22.40	$22.69

TABLE 2-2.5

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: ROUTINE EKG WITH AT LEAST 12 LEADS INCLUDING INTERPRETATION AND REPORT
HCFA CODE: 93000
SPECIALTY: CARDIOVASCULAR DISEASE

	Office Charges (1)	(2)	Hospital Charges (3)	(4)	Differentials (1)-(3)	(1)-(4)
		Professional		Professional		
Region	Global	Only	Global	Only		
Boston	$31.88 (114873)	$23.64 (14)	$ 9.07 (24378)	$12.43 (1395)	$22.81	$19.46
New York	$38.21 (345897)	* (0)	$ 7.94 (5382)	$25.00 (3)	$30.28	$13.21
Philadelphia	$35.66 (253907)	$13.00 (838)	$ 9.09 (234854)	$ 7.93 (34344)	$26.57	$27.73
Atlanta	$30.00 (138141)	$17.10 (226)	$14.33 (908)	$15.18 (2828)	$15.67	$14.82
Chicago	$20.72 (233767)	$12.29 (21)	$ 7.28 (168214)	$ 6.76 (7297)	$13.44	$13.95
Dallas	$30.03 (153941)	$30.74 (19)	$31.03 (2377)	$21.38 (16)	$-1.00	$ 8.66
Kansas City	$31.52 (14645)	-- —	$20.61 (18)	-- —	$10.91	—
Denver	$30.64 (5537)	—	$28.00 (2)	—	$ 2.64	
San Francisco	$40.17 (211408)	$27.56 (565)	$14.61 (34273)	$14.22 (5554)	$25.57	$25.96
Seattle	$33.40 (33246)	$ 9.00 (1)	$20.73 (353)	$ 9.38 (183)	$12.67	$24.01
National Total	$33.07 (1505362)	$18.71 (1684)	$ 8.96 (470759)	$ 8.97 (51620)	$24.11	$24.10

TABLE 2-2.6

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: ROUTINE EKG WITH AT LEAST 12 LEADS INCLUDING INTERPRETATION AND REPORT
HCFA CODE: 93000
SPECIALTY: INTERNAL MEDICINE

	Office Charges		Hospital Charges		Differentials	
	(1)	(2)	(3)	(4)	(1)-(3)	(1)-(4)
		Professional		Professional		
Region	Global	Only	Global	Only		
Boston	$30.49 (311750)	$16.67 (9)	$32.47 (58)	$23.59 (367)	•	$ 6.90
New York	$35.96 (935232)	$39.17 (6)	$ 8.37 (2469)	• (0)	$27.59	•
Philadelphia	$32.45 (471577)	$14.52 (64)	$18.88 (2443)	$ 9.27 (3530)	$13.57	$23.17
Atlanta	$26.72 (511395)	$16.72 (610)	$14.12 (6616)	$14.78 (9153)	$12.60	$11.94
Chicago	$27.00 (543003)	$ 7.21 (47)	$10.33 (22212)	$ 9.53 (1407)	$16.67	$17.47
Dallas	$29.10 (325114)	$17.00 (21)	$23.57 (698)	$20.71 (14)	$ 5.54	$ 8.39
Kansas City	$28.20 (145893)	$30.00 (8)	$17.57 (23)	• (0)	$10.64	•
Denver	$31.06 (44007)	$25.50 (2)	$12.22 (45)	$ 7.50 (4)	$18.84	$23.56
San Francisco	$38.46 (468864)	$23.36 (318)	$16.90 (5728)	$19.66 (106)	$21.55	$18.80
Seattle	$32.51 (104770)	$37.00 (1)	$31.06 (281)	• (0)	$1.45	•
National Total	$31.89 (3861605)	$18.39 (1086)	$12.68 (40573)	$13.20 (14581)	$19.21	$18.69

TABLE 2-2.7

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: HOLTER MONITOR
HCFA CODES: 93258, 93259, 93262, 93263
SPECIALTY: CARDIOVASCULAR DISEASE

	Office Charges (1)	(2)	Hospital Charges (3)	(4)	Differentials (1)-(3)	(1)-(4)
		Professional		Professional		
Region	Global	Only	Global	Only		
Boston	$189.10 (7483)	$261.33 (6)	$40.23 (4520)	$56.41 (4625)	$148.87	$132.69
New York	$186.24 (9255)	$69.99 (284)	$73.20 (6534)	$55.63 (15654)	$113.05	$130.61
Philadelphia	$206.30 (11694)	$57.43 (81)	$53.17 (16591)	$49.49 (1875)	$153.13	$156.81
Atlanta	$212.05 (17488)	$76.46 (448)	$75.92 (2710)	$62.49 (17266)	$136.12	$149.55
Chicago	$203.24 (16755)	$57.83 (41)	$82.20 (10602)	$56.56 (4544)	$121.03	$146.68
Dallas	$209.99 (17926)	$71.08 (898)	$106.81 (599)	$58.90 (14360)	$103.18	$151.09
Kansas City	$149.85 (1820)	• (0)	$70.78 (7086)	$47.50 (4)	$79.07	$102.35
Denver	$148.32 (1702)	$69.69 (26)	$63.96 (286)	$67.18 (182)	$84.35	$81.14
San Francisco	$229.12 (17624)	$109.56 (432)	$79.95 (5234)	$71.99 (1979)	$149.18	$157.13
Seattle	$174.91 (1787)	$44.00 (1)	$87.74 (126)	$40.11 (106)	$87.17	$134.80
National Total	$205.78 (103534)	$79.27 (2217)	$66.92 (54288)	$58.84 (60595)	$138.86	$146.93

TABLE 2-2.8

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: HOLTER MONITOR
HCFA CODES: 93258, 93259, 93262, 93263
SPECIALTY: INTERNAL MEDICINE

	Office Charges		Hospital Charges		Differentials	
	(1)	(2)	(3)	(4)	(1)-(3)	(1)-(4)
		Professional		Professional		
Region	Global	Only	Global	Only		
Boston	$173.33 (5302)	$27.00 (3)	$54.38 (353)	$51.26 (1190)	$118.95	$122.07
New York	$188.25 (18150)	$73.37 (200)	$64.74 (9182)	$61.00 (3289)	$123.51	$127.25
Philadelphia	$213.86 (18272)	$70.21 (28)	$59.66 (6285)	$64.23 (914)	$154.20	$149.64
Atlanta	$202.71 (32592)	$71.69 (932)	$63.85 (3043)	$57.94 (20640)	$138.85	$144.76
Chicago	$201.54 (30169)	$159.72 (29)	$81.82 (5474)	$51.54 (2917)	$119.72	$150.00
Dallas	$197.23 (15973)	$63.29 (341)	$135.61 (308)	$39.53 (10040)	$61.62	$157.70
Kansas City	$163.14 (7263)	$38.17 (6)	$55.95 (6022)	$52.62 (410)	$107.19	$110.52
Denver	$163.82 (2582)	$55.01 (72)	$73.50 (766)	$51.27 (758)	$90.32	$112.55
San Francisco	$210.65 (13634)	$179.38 (24)	$106.37 (1099)	$77.28 (440)	$104.28	$133.37
Seattle	$172.89 (2295)	$38.45 (31)	$150.15 (20)	$36.17 (18)	$22.74	$136.72
National Total	$198.02 (146232)	$71.69 (1666)	$67.15 (32552)	$53.15 (40616)	$130.88	$144.88

TABLE 2-2.9

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: REAL TIME EKG MONITOR
HCFA CODE: 93266
SPECIALTY: GENERAL PRACTICE

Region	Office Charges (1) Global	Office Charges (2) Professional Only	Hospital Charges (3) Global	Hospital Charges (4) Professional Only	Differentials (1)-(3)	Differentials (1)-(4)
Boston	-- --	-- --	-- --	-- --	--	--
New York	. (0)	--	. (0)	-- --	--	--
Philadelphia	. (0)	-- --	. (0)	-- --	--	
Atlanta	$155.30 (913)	$55.19 (27)	$55.20 (243)	$41.02 (123)	$100.10	$114.28
Chicago	$259.71 (7)	-- --	$129.00 (1)	-- --	$130.71	$130.71
Dallas	-- --	-- --	-- --	-- --	--	--
Kansas City	$155.27 (11)	-- --	. (0)	-- --	.	.
Denver	-- --	-- --	-- --	-- --	--	--
San Francisco	. (0)	-- --	. (0)	-- --	.	.
Seattle	-- --	-- --	-- --	-- --	--	--
National Total	$156.08 (931)	$55.19 (27)	$55.50 (244)	$41.02 (123)	$100.58	$115.06

TABLE 2-2.10

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: REALTIME EKG MONITOR
HCFA CODE: 93266
SPECIALTY: INTERNAL MEDICINE

	Office Charges		Hospital Charges		Differentials	
	(1)	(2)	(3)	(4)	(1)-(3)	(1)-(4)
		Professional		Professional		
Region	Global	Only	Global	Only		
Boston	--	--	--	--	--	--
	--	--	--	--		
New York	$201.00	--	.	--	.	.
	(1)	--	(0)	--		
Philadelphia	$139.20	--	$168.67	--	.	.
	(10)	--	(3)	--		
Atlanta	$162.13	$66.08	$94.27	$51.51	$67.85	$110.62
	(5114)	(787)	(1933)	(8878)		
Chicago	$215.91	--	$38.00	--	$177.91	$177.91
	(11)	--	(5)	--		
Dallas	.	.	.	$60.00	.	.
	(0)	(0)	(0)	(1)		
Kansas City	$108.77	.	.	.	.	.
	(47)	(0)	(0)	(0)		
Denver	--	--	--	--	--	--
	--	--	--	--		
San Francisco	$208.75	--	$240.00	--	$-31.25	$-31.25
	(4)	--	(1)	--		
Seattle	--	--	--	--	--	--
	--	--	--	--		
National Total	$161.76	$66.08	$94.32	$51.51	$67.44	$110.24
	(5187)	(787)	(1942)	(8879)		

TABLE 2-2.11

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: SPIROMETRY
HCFA CODES: 94010, 94060, 94070
SPECIALTY: INTERNAL MEDICINE

Region	Office Charges (1) Global	Office Charges (2) Professional Only	Hospital Charges (3) Global	Hospital Charges (4) Professional Only	Differentials (1)-(3)	Differentials (1)-(4)
Boston	$25.42 (12991)	$28.42 (12)	$13.76 (440)	$25.15 (887)	$11.66	$ 0.27
New York	$42.72 (70810)	$12.78 (167)	$30.51 (637)	$24.23 (4834)	$12.21	$18.49
Philadelphia	$37.41 (26663)	$20.70 (158)	$18.27 (3711)	$16.84 (3986)	$19.14	$20.57
Atlanta	$32.14 (46138)	$19.97 (900)	$19.42 (1323)	$19.29 (23599)	$12.73	$12.86
Chicago	$52.13 (50598)	$22.71 (719)	$22.30 (12102)	$12.71 (2416)	$29.83	$39.42
Dallas	$35.13 (16834)	$27.19 (121)	$20.51 (2881)	$19.08 (3786)	$14.62	$16.04
Kansas City	$29.03 (8356)	$22.78 (258)	$20.14 (1813)	$17.94 (5654)	$ 8.89	$11.09
Denver	$32.59 (4629)	$ 9.54 (123)	$26.95 (1249)	$17.40 (1001)	$ 5.64	$15.19
San Francisco	$46.10 (46356)	$35.69 (150)	$36.88 (792)	$33.79 (1111)	$ 9.22	$12.32
Seattle	$34.41 (11492)	$25.04 (110)	$19.54 (570)	$15.91 (1880)	$14.87	$18.50
National Total	$40.67 (294867)	$21.52 (2718)	$21.89 (25518)	$19.35 (49154)	$18.78	$21.32

TABLE 2-2.12

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: SPIROMETRY
HCFA CODES: 94010, 94060, 94070
SPECIALTY: PULMONARY DISEASE

	Office Charges (1)	(2)	Hospital Charges (3)	(4)	Differentials (1)-(3)	(1)-(4)
		Professional		Professional		
Region	Global	Only	Global	Only		
Boston	$32.17 (10295)	$31.63 (51)	$19.97 (1691)	$19.75 (7405)	$12.20	$12.42
New York	$44.18 (18945)	$11.18 (718)	$21.28 (276)	$17.40 (8197)	$22.89	$26.78
Philadelphia	$40.75 (9745)	$13.86 (601)	$18.92 (13570)	$13.28 (10481)	$21.82	$27.47
Atlanta	$38.21 (12819)	$20.78 (831)	$19.34 (1767)	$23.93 (11892)	$18.87	$14.28
Chicago	$46.53 (14217)	$34.52 (104)	$19.68 (25127)	$13.23 (4011)	$26.85	$33.30
Dallas	$40.48 (12114)	$26.20 (97)	$20.51 (5794)	$22.22 (5974)	$19.97	$18.26
Kansas City	$28.72 (2655)	. (0)	$19.11 (2017)	$16.55 (1325)	$ 9.61	$12.18
Denver	$33.89 (2001)	$28.78 (9)	$27.32 (552)	$16.79 (894)	$ 6.57	$17.09
San Francisco	$54.04 (15689)	$42.56 (549)	$25.73 (5554)	$27.27 (12086)	$28.31	$26.76
Seattle	$35.82 (3125)	$24.73 (30)	$21.28 (579)	$16.79 (2006)	$14.54	$19.03
National Total	$42.43 (101605)	$21.99 (2990)	$20.25 (56927)	$20.21 (64271)	$22.17	$22.22

TABLE 2-2.13

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: NON-INV PER VASCULAR
HCFA CODES: 93850, 93860, 93890, 93910, 93950, 93960
SPECIALTY: GENERAL SURGERY

	Office Charges (1)	(2)	Hospital Charges (3)	(4)	Differentials (1)-(3)	(1)-(4)
		Professional		Professional		
Region	Global	Only	Global	Only		
Boston	$89.30 (8525)	$29.16 (386)	$82.99 (239)	$24.66 (5207)	$ 6.31	$64.64
New York	$82.10 (17399)	$39.82 (448)	$45.76 (1820)	$44.42 (12150)	$36.34	$37.68
Philadelphia	$110.23 (14944)	$54.63 (243)	$53.38 (14409)	$48.90 (8711)	$56.85	$61.33
Atlanta	$81.72 (26133)	$32.26 (842)	$42.75 (7181)	$27.30 (21059)	$38.97	$54.43
Chicago	$104.25 (15639)	$38.50 (14)	$29.48 (27734)	$43.06 (1111)	$74.76	$61.19
Dallas	$71.68 (8672)	$52.73 (239)	$47.48 (1883)	$65.55 (2777)	$24.20	$ 6.13
Kansas City	$87.22 (2322)	$31.77 (22)	$31.08 (2356)	$28.48 (2950)	$56.14	$58.74
Denver	$77.94 (1269)	$42.46 (28)	$73.31 (220)	$28.95 (427)	$ 4.63	$48.99
San Francisco	$118.23 (4209)	$99.40 (511)	$64.35 (416)	$55.44 (487)	$53.88	$62.78
Seattle	$63.66 (4904)	$40.05 (168)	$38.76 (399)	$37.51 (422)	$24.90	$26.15
National Total	$89.75 (104016)	$48.98 (2901)	$39.15 (56657)	$36.85 (55301)	$50.61	$52.90

TABLE 2-2.14

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: NON-INV PER VASCULAR
HCFA CODES: 93850, 93860, 93890, 93910, 93950, 93960
SPECIALTY: THORACIC SURGERY

	Office Charges (1)	(2)	Hospital Charges (3)	(4)	Differentials (1)-(3)	(1)-(4)
		Professional		Professional		
Region	Global	Only	Global	Only		
Boston	$90.92 (1351)	• (0)	$35.02 (205)	$47.01 (325)	$55.90	$43.91
New York	$87.64 (5581)	$41.72 (57)	$54.76 (417)	$45.37 (2215)	$32.88	$42.27
Philadelphia	$123.09 (11068)	$60.07 (145)	$59.83 (4738)	$37.93 (7444)	$63.26	$85.16
Atlanta	$92.85 (5305)	$42.77 (212)	$21.63 (2737)	$32.43 (2439)	$71.22	$60.42
Chicago	$102.16 (3787)	$35.20 (10)	$42.68 (5095)	$24.88 (33)	$59.48	$77.28
Dallas	$79.77 (12206)	$58.86 (303)	$36.89 (3705)	$46.97 (4414)	$42.88	$32.80
Kansas City	$87.64 (2506)	$55.00 (25)	$41.63 (1782)	$31.18 (2454)	$46.01	$56.46
Denver	$90.95 (153)	$30.50 (2)	$20.85 (342)	$17.81 (663)	$70.10	$73.15
San Francisco	$134.21 (4511)	$80.50 (162)	$91.03 (1628)	$73.62 (2514)	$43.18	$60.59
Seattle	$65.20 (803)	$41.25 (4)	$29.71 (49)	$28.19 (232)	$35.49	$37.01
National Total	$99.82 (47271)	$57.59 (920)	$46.28 (20698)	$42.46 (22733)	$53.55	$57.36

TABLE 2-2.15

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: ORTHO X-RAY (PELVIS)
HCFA CODES: 72170, 72180, 72190
SPECIALTY: ORTHOPEDIC SURGERY

Region	Office Charges (1) Global	(2) Professional Only	Hospital Charges (3) Global	(4) Professional Only	Differentials (1)-(3)	(1)-(4)
Boston	$32.45 (6107)	$20.00 (1)	$31.00 (1)	$14.97 (29)	$ 1.45	$17.49
New York	$41.63 (14019)	$17.88 (577)	$20.17 (12)	$17.37 (224)	$ 21.47	$24.27
Philadelphia	$34.28 (14699)	$15.00 (12)	$19.50 (88)	$13.00 (4)	$ 14.78	$21.28
Atlanta	$28.97 (40290)	$13.49 (91)	$15.70 (10)	$13.70 (138)	$ 13.27	$15.91
Chicago	$26.81 (22843)	$22.50 (14)	$101.40 (106)	$13.62 (34)	$-74.59	$13.19
Dallas	$28.75 (17490)	$12.60 (53)	$12.96 (48)	$13.09 (32)	$ 15.80	$15.66
Kansas City	$26.90 (9500)	. (0)	$12.58 (24)	$16.17 (24)	$ 14.32	$10.73
Denver	$30.84 (7258)	$15.05 (22)	$15.33 (3)	$11.08 (143)	$ 15.51	$19.76
San Francisco	$36.19 (20804)	$20.07 (27)	$13.67 (9)	$14.62 (50)	$ 22.52	$21.57
Seattle	$30.45 (8067)	$18.11 (47)	$20.64 (22)	$10.11 (9)	$ 9.82	$20.34
National Total	$31.33 (161077)	$17.13 (844)	$44.71 (323)	$14.35 (687)	$-13.38	$16.98

TABLE 2-2.16

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: ORTHO X-RAY (PELVIS)
HCFA CODES: 72170, 72180, 72190
SPECIALTY: RADIOLOGY

	Office Charges		Hospital Charges		Differentials	
	(1)	(2)	(3)	(4)	(1)-(3)	(1)-(4)
		Professional		Professional		
Region	Global	Only	Global	Only		
Boston	$33.79 (5213)	$15.96 (113)	$13.08 (1785)	$13.92 (33769)	$20.71	$19.87
New York	$40.38 (13470)	$16.81 (627)	$16.64 (3365)	$14.44 (50705)	$23.74	$25.94
Philadelphia	$33.45 (5067)	$10.65 (422)	$13.74 (30301)	$13.45 (17732)	$19.71	$20.00
Atlanta	$29.13 (8280)	$11.43 (1198)	$11.43 (12155)	$11.79 (74706)	$17.70	$17.34
Chicago	$28.80 (8610)	$11.50 (537)	$13.84 (59486)	$11.83 (24838)	$14.96	$16.97
Dallas	$28.29 (4992)	$13.74 (443)	$12.96 (24514)	$11.97 (20049)	$15.34	$16.32
Kansas City	$28.25 (2526)	$13.50 (8)	$11.41 (15678)	$12.15 (17459)	$16.84	$16.10
Denver	$28.80 (1775)	$12.58 (202)	$12.58 (2195)	$12.46 (9618)	$16.22	$16.35
San Francisco	$37.79 (7641)	$17.41 (444)	$13.88 (8069)	$14.96 (32143)	$23.92	$22.84
Seattle	$34.40 (2801)	$12.75 (108)	$11.64 (4571)	$12.73 (8643)	$22.76	$21.67
National Total	$33.58 (60375)	$13.30 (4102)	$13.25 (162119)	$13.04 (289662)	$20.34	$20.54

TABLE 2-2.17

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: ORTHO X-RAY (SHOULDER)
HCFA CODES: 73020, 73030
SPECIALTY: ORTHOPEDIC SURGERY

	Office Charges (1)	(2)	Hospital Charges (3)	(4)	Differentials (1)-(3)	(1)-(4)
Region	Global	Professional Only	Global	Professional Only		
Boston	$33.07 (12727)	$14.40 (10)	$31.88 (8)	$11.93 (55)	$ 1.19	$21.14
New York	$38.75 (20894)	$16.02 (586)	$21.86 (29)	$15.33 (273)	$16.88	$23.41
Philadelphia	$33.85 (21061)	$14.78 (36)	$20.12 (154)	$12.61 (23)	$13.73	$21.24
Atlanta	$31.20 (44961)	$13.35 (142)	$16.14 (64)	$13.94 (135)	$15.06	$17.26
Chicago	$29.00 (22476)	$18.10 (20)	$19.97 (89)	$23.57 (37)	$ 9.03	$ 5.43
Dallas	$29.07 (17103)	$12.19 (68)	$13.56 (36)	$11.50 (34)	$15.52	$17.57
Kansas City	$29.33 (8270)	$35.00 (1)	$12.10 (20)	$12.90 (10)	$17.23	$16.43
Denver	$28.82 (4783)	$10.61 (18)	$14.00 (4)	$12.64 (42)	$14.82	$16.17
San Francisco	$38.82 (24133)	$26.92 (77)	$20.77 (13)	$14.82 (38)	$18.05	$24.00
Seattle	$31.98 (6375)	$13.22 (50)	$14.00 (6)	$8.22 (9)	$17.98	$23.76
National Total	$32.91 (182783)	$15.98 (1008)	$18.76 (423)	$14.59 (656)	$14.15	$18.32

TABLE 2-2.18

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: ORTHO X-RAY (SHOULDER)
HCFA CODES: 73020, 73030
SPECIALTY: RADIOLOGY

Region	Office Charges (1) Global	Office Charges (2) Professional Only	Hospital Charges (3) Global	Hospital Charges (4) Professional Only	Differentials (1)-(3)	Differentials (1)-(4)
Boston	$33.60 (5723)	$13.69 (72)	$10.42 (1784)	$12.41 (24526)	$23.18	$21.20
New York	$39.06 (13442)	$16.18 (571)	$14.77 (3716)	$14.22 (38119)	$24.28	$24.84
Philadelphia	$35.53 (8489)	$14.60 (890)	$13.93 (32586)	$14.02 (18961)	$21.60	$21.52
Atlanta	$33.25 (10148)	$13.32 (801)	$14.25 (12248)	$13.20 (55621)	$18.99	$20.04
Chicago	$29.47 (9589)	$12.80 (437)	$12.19 (48502)	$11.84 (18215)	$17.28	$17.62
Dallas	$31.62 (5542)	$12.45 (468)	$12.17 (16825)	$12.28 (15293)	$19.45	$19.34
Kansas City	$30.45 (2416)	$13.50 (10)	$12.29 (9576)	$12.08 (10699)	$18.16	$18.37
Denver	$27.52 (1297)	$12.59 (131)	$13.22 (1267)	$ 9.88 (3855)	$14.30	$17.64
San Francisco	$40.54 (11302)	$18.37 (478)	$14.27 (5436)	$15.44 (28300)	$26.27	$25.10
Seattle	$35.07 (3061)	$13.44 (140)	$12.25 (2582)	$12.11 (5805)	$22.82	$22.96
National Total	$35.05 (71009)	$14.44 (3998)	$12.95 (134522)	$13.33 (219394)	$22.11	$21.72

TABLE 2-2.19

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: ORTHO X-RAY (HIP)
HCFA CODES: 73500, 73510, 73520
SPECIALTY: ORTHOPEDIC SURGERY

Region	Office Charges (1) Global	Office Charges (2) Professional Only	Hospital Charges (3) Global	Hospital Charges (4) Professional Only	Differentials (1)-(3)	Differentials (1)-(4)
Boston	$36.58 (24738)	$15.75 (4)	$30.83 (6)	$13.36 (115)	$ 5.74	$23.22
New York	$44.72 (37198)	$21.67 (587)	$20.28 (95)	$24.80 (907)	$24.44	$19.92
Philadelphia	$39.11 (49069)	$17.10 (99)	$18.93 (758)	$14.16 (43)	$20.17	$24.94
Atlanta	$33.82 (91122)	$15.77 (183)	$18.85 (175)	$15.54 (401)	$14.96	$18.28
Chicago	$32.97 (71711)	$20.52 (31)	$30.62 (573)	$12.03 (210)	$ 2.35	$20.93
Dallas	$32.81 (39357)	$12.98 (135)	$14.25 (201)	$14.07 (141)	$18.56	$18.74
Kansas City	$32.91 (21027)	$27.50 (2)	$14.33 (69)	$15.86 (29)	$18.57	$17.04
Denver	$34.51 (11922)	$17.03 (38)	$16.08 (12)	$10.62 (193)	$18.42	$23.89
San Francisco	$45.56 (51878)	$23.50 (147)	$20.54 (56)	$16.56 (230)	$25.02	$29.00
Seattle	$37.63 (16408)	$18.13 (132)	$28.76 (45)	$ 8.24 (42)	$ 8.87	$29.39
National Total	$36.94 (414430)	$19.37 (1358)	$22.01 (1990)	$18.19 (2311)	$14.93	18.75

TABLE 2-2.20

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: ORTHO X-RAY (HIP)
HCFA CODES: 73500, 73510, 73520
SPECIALTY: RADIOLOGY

Region	Office Charges (1) Global	Office Charges (2) Professional Only	Hospital Charges (3) Global	Hospital Charges (4) Professional Only	Differentials (1)-(3)	Differentials (1)-(4)
Boston	$40.94 (9218)	$14.79 (390)	$13.77 (4225)	$14.40 (67154)	$27.17	$26.54
New York	$48.28 (18182)	$23.35 (1232)	$19.15 (9505)	$18.38 (96375)	$29.13	$29.90
Philadelphia	$40.07 (13769)	$16.25 (1770)	$15.81 (77656)	$16.08 (46163)	$24.26	$23.99
Atlanta	$38.13 (19396)	$14.90 (2003)	$16.75 (31745)	$14.95 (155380)	$21.38	$23.18
Chicago	$33.52 (20342)	$16.41 (1025)	$13.84 (138747)	$12.65 (36184)	$19.68	$20.87
Dallas	$33.68 (10255)	$14.95 (1133)	$14.23 (49455)	$14.09 (41756)	$19.46	$19.60
Kansas City	$31.97 (4874)	$17.45 (22)	$13.33 (30074)	$13.52 (30670)	$18.65	$18.46
Denver	$32.84 (1994)	$13.82 (482)	$15.04 (3862)	$13.76 (6279)	$17.80	$19.08
San Francisco	$48.88 (17502)	$20.17 (945)	$16.78 (17162)	$17.53 (77517)	$32.10	$31.35
Seattle	$42.13 (5183)	$16.34 (276)	$14.15 (7656)	$14.68 (15964)	$27.98	$27.45
National Total	$40.33 (120715)	$16.98 (9278)	$14.80 (370087)	$15.60 (573442)	$25.53	$24.74

TABLE 2-2.21

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: ORTHO X-RAY (KNEE)
HCFA CODES: 73560, 73562, 73564
SPECIALTY: ORTHOPEDIC SURGERY

	Office Charges		Hospital Charges		Differentials	
	(1)	(2)	(3)	(4)	(1)-(3)	(1)-(4)
		Professional		Professional		
Region	Global	Only	Global	Only		
Boston	$32.61 (26995)	$15.67 (6)	$32.63 (19)	$13.87 (125)	•	$18.73
New York	$37.32 (39345)	$15.81 (1037)	$17.64 (80)	$15.18 (300)	$19.69	$22.14
Philadelphia	$35.24 (56625)	$16.83 (75)	$21.39 (363)	$11.53 (15)	$13.85	$23.71
Atlanta	$30.25 (93231)	$13.69 (266)	$14.96 (91)	$12.61 (259)	$15.29	$17.63
Chicago	$28.50 (81570)	$16.56 (43)	$26.22 (333)	$11.38 (120)	$ 2.28	$17.13
Dallas	$28.37 (53546)	$12.76 (200)	$13.29 (143)	$13.12 (160)	$15.07	$15.25
Kansas City	$30.23 (29466)	$21.00 (1)	$13.13 (75)	$13.31 (48)	$17.09	$16.91
Denver	$28.00 (18446)	$12.22 (85)	$11.67 (6)	$13.33 (54)	$16.33	$14.66
San Francisco	$38.12 (61348)	$23.68 (146)	$16.88 (32)	$15.06 (136)	$21.25	$23.06
Seattle	$30.17 (19348)	$16.48 (111)	$23.87 (45)	$10.50 (20)	$ 6.31	$19.67
National Total	$31.96 (479920)	$15.74 (1970)	$20.61 (1187)	$13.59 (1237)	$11.35	$18.37

TABLE 2-2.22

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: ORTHO X-RAY (KNEE)
HCFA CODES: 73560, 73562, 73564
SPECIALTY: RADIOLOGY

Region	Office Charges (1) Global	Office Charges (2) Professional Only	Hospital Charges (3) Global	Hospital Charges (4) Professional Only	Differentials (1)-(3)	Differentials (1)-(4)
Boston	$34.80 (10411)	$13.59 (190)	$12.17 (2962)	$13.63 (42169)	$22.62	$21.17
New York	$36.75 (20315)	$15.91 (981)	$14.44 (5343)	$13.78 (58079)	$22.31	$22.97
Philadelphia	$37.86 (15172)	$13.94 (1612)	$14.71 (53956)	$14.49 (31484)	$23.16	$23.38
Atlanta	$31.99 (16130)	$12.60 (1754)	$13.41 (19876)	$12.53 (84604)	$18.58	$19.47
Chicago	$29.48 (22253)	$13.82 (1035)	$12.63 (85505)	$11.84 (29433)	$16.85	$17.64
Dallas	$28.35 (10767)	$12.04 (719)	$11.86 (27256)	$11.77 (24811)	$16.49	$16.58
Kansas City	$31.20 (5227)	$10.75 (4)	$10.60 (17545)	$11.47 (17345)	$20.60	$19.73
Denver	$26.65 (2625)	$13.48 (226)	$12.33 (2031)	$ 9.91 (6604)	$14.32	$16.74
San Francisco	$39.56 (19622)	$16.73 (781)	$14.70 (8967)	$15.06 (42495)	$24.86	$24.51
Seattle	$32.91 (5337)	$11.91 (211)	$10.91 (4023)	$11.95 (8649)	$22.00	$20.96
National Total	$33.99 (127859)	$13.90 (7513)	$13.03 (227464)	$13.13 (345673)	$20.96	$20.86

TABLE 2-2.23

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: ORTHO X-RAY (FOOT)
HCFA CODES: 73620, 73630
SPECIALTY: RADIOLOGY

	Office Charges		Hospital Charges		Differentials	
	(1)	(2)	(3)	(4)	(1)-(3)	(1)-(4)
Region	Global	Professional Only	Global	Professional Only		
Boston	$29.44 (4467)	$12.01 (106)	$ 8.92 (1426)	$11.93 (22354)	$20.52	$17.51
New York	$34.84 (9131)	$15.39 (648)	$12.02 (3722)	$13.29 (34913)	$22.82	$21.55
Philadelphia	$30.60 (7265)	$12.67 (833)	$12.04 (34410)	$11.97 (17540)	$18.57	$18.64
Atlanta	$29.94 (8058)	$11.49 (775)	$13.18 (10647)	$12.54 (49252)	$16.76	$17.41
Chicago	$26.74 (9748)	$13.19 (522)	$11.37 (45680)	$12.19 (14594)	$15.37	$14.55
Dallas	$27.96 (4565)	$11.50 (428)	$11.05 (13611)	$11.98 (12551)	$16.91	$15.98
Kansas City	$32.34 (2261)	$10.00 (1)	$11.73 (7079)	$11.68 (9085)	$20.61	$20.66
Denver	$21.87 (1071)	$11.78 (130)	$12.59 (847)	$ 7.71 (3890)	$ 9.28	$14.16
San Francisco	$36.65 (8373)	$16.08 (398)	$13.83 (4580)	$14.18 (23738)	$22.83	$22.47
Seattle	$31.65 (2456)	$12.31 (124)	$11.27 (1939)	$11.61 (4322)	$20.38	$20.04
National Total	$31.06 (57395)	$13.11 (3965)	$11.79 (123941)	$12.53 (192239)	$19.27	$18.53

TABLE 2-2.24

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: ORTHO X-RAY (FOOT)
HCFA CODES: 73620, 73630
SPECIALTY: PODIATRY - SURGICAL CHIROPODY

Region	Office Charges (1) Global	Office Charges (2) Professional Only	Hospital Charges (3) Global	Hospital Charges (4) Professional Only	Differentials (1)-(3)	Differentials (1)-(4)
Boston	$26.36 (24814)	$19.64 (22)	$21.33 (3)	$16.45 (49)	$ 5.03	$ 9.91
New York	$30.47 (118411)	$12.30 (1189)	$27.47 (948)	$10.24 (313)	$ 3.01	$20.23
Philadelphia	$30.18 (69152)	$11.60 (10)	$21.49 (538)	$11.60 (5)	$ 8.70	$18.58
Atlanta	$28.73 (77661)	$13.31 (26)	$15.90 (168)	$12.25 (138)	$12.83	$16.48
Chicago	$25.94 (78563)	$39.61 (495)	$12.34 (114)	$11.55 (58)	$13.60	$14.39
Dallas	$23.73 (25163)	$ 9.85 (34)	$11.49 (134)	$10.49 (71)	$12.24	$13.24
Kansas City	$26.49 (13473)	$25.53 (55)	$13.38 (55)	$14.00 (18)	$13.11	$12.49
Denver	$23.71 (4463)	$23.33 (3)	$12.38 (8)	$ 7.50 (4)	$11.34	$16.21
San Francisco	$36.30 (106317)	$20.03 (357)	$17.71 (78)	$12.96 (471)	$18.59	$23.34
Seattle	$26.18 (15394)	$13.44 (9)	$16.00 (44)	$12.00 (9)	$10.18	$14.18
National Total	$29.88 (533411)	$20.09 (2200)	$22.10 (2090)	$12.03 (1136)	$ 7.78	$17.85

TABLE 2-2.25

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: OPTHAL BIOMETRY
HCFA CODE: 76516
SPECIALTY: OPTHAMOLOGY

Region	Office Charges (1) Global	Office Charges (2) Professional Only	Hospital Charges (3) Global	Hospital Charges (4) Professional Only	Differentials (1)-(3)	Differentials (1)-(4)
Boston	$142.94 (31463)	$97.48 (122)	$ 71.31 (272)	$ 99.23 (746)	$71.63	$43.71
New York	$111.08 (49487)	$65.05 (153)	$ 79.75 (239)	$ 62.75 (1238)	$31.32	$48.32
Philadelphia	$144.95 (59631)	$74.34 (1460)	$ 72.96 (2455)	$ 51.49 (854)	$71.99	$93.46
Atlanta	$128.63 (83815)	$74.35 (318)	$ 83.39 (510)	$ 64.21 (2319)	$45.25	$64.42
Chicago	$132.22 (63618)	$109.53 (47)	$ 86.22 (2193)	$103.40 (1232)	$46.00	$28.82
Dallas	$126.35 (82624)	$55.27 (724)	$ 85.27 (4934)	$ 56.46 (515)	$41.08	$69.89
Kansas City	$ 87.38 (25290)	$97.00 (2)	$ 45.28 (420)	$ 43.06 (314)	$42.10	$44.32
Denver	$120.50 (15028)	$118.17 (110)	$105.38 (268)	$ 56.47 (509)	$15.13	$64.04
San Francisco	$169.03 (87866)	$126.49 (368)	$138.45 (318)	$102.67 (783)	$30.58	$66.36
Seattle	$ 93.90 (20900)	$92.03 (31)	$ 74.52 (1863)	$ 76.88 (68)	$19.37	$17.01
National Total	$132.97 (519722)	$78.49 (3335)	$81.65 (13472)	$73.32 (8578)	$51.31	$59.65

TABLE 2-2.26

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: OPTHAL BIOMETRY
HCFA CODE: 76516
SPECIALTY: CLINIC, GROUP PRACTICE

Region	Office Charges (1) Global	Office Charges (2) Professional Only	Hospital Charges (3) Global	Hospital Charges (4) Professional Only	Differentials (1)-(3)	Differentials (1)-(4)
Boston	$126.24 (661)	. (0)	. (0)	$72.92 (12)	.	$53.32
New York	$ 60.29 (164)	-- --	. (0)	-- --	.	--
Philadelphia	$140.84 (791)	$ 45.00 (14)	$44.00 (1)	$45.00 (1)	$96.84	$95.84
Atlanta	$126.06 (109)	$ 82.00 (1)	. (0)	$74.50 (6)	.	$51.56
Chicago	$118.67 (1937)	-- --	$82.88 (162)	-- --	$35.79	$35.79
Dallas	. (0)	. (0)	. (0)	. (0)	.	.
Kansas City	$ 84.93 (934)	. (0)	$34.25 (4)	$52.35 (34)	$50.68	$32.57
Denver	$125.24 (17)	. (0)	. (0)	. (0)	.	.
San Francisco	$153.29 (2666)	$123.68 (19)	$74.45 (38)	$124.38 (79)	$78.85	$28.91
Seattle	$ 98.68 (242)	$ 49.50 (20)	$58.00 (3)	$49.50 (4)	$40.68	$49.18
National Total	$127.96 (7521)	$75.04 (54)	$79.86 (208)	$96.85 (136)	$48.10	$31.11

TABLE 2-2.27

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: CAT SCAN OF HEAD
HCFA CODES: 70450, 70460, 70470
SPECIALTY: RADIOLOGY

Region	Office Charges (1) Global	Office Charges (2) Professional Only	Hospital Charges (3) Global	Hospital Charges (4) Professional Only	Differentials (1)-(3)	Differentials (1)-(4)
Boston	$247.59 (3381)	$ 80.04 (305)	$ 56.56 (7363)	$ 82.99 (84535)	$191.03	$164.60
New York	$263.44 (21423)	$ 93.78 (2560)	$111.93 (6020)	$ 86.49 (135849)	$151.51	$176.95
Philadelphia	$310.59 (8888)	$121.03 (345)	$102.81 (114938)	$101.36 (69890)	$207.78	$209.23
Atlanta	$316.36 (14396)	$102.83 (1939)	$102.39 (40347)	$ 95.73 (242507)	$213.97	$220.63
Chicago	$201.54 (10210)	$ 68.22 (99)	$ 68.35 (205037)	$ 84.83 (48274)	$133.19	$116.71
Dallas	$297.36 (10533)	$ 93.30 (1477)	$ 95.52 (70541)	$ 99.47 (67208)	$201.85	$197.90
Kansas City	$262.38 (2558)	$ 92.86 (22)	$ 83.22 (28253)	$ 80.99 (41829)	$179.16	$181.39
Denver	$284.86 (883)	$ 94.84 (81)	$ 93.83 (4523)	$ 77.06 (7393)	$191.03	$207.80
San Francisco	$346.90 (13160)	$ 96.14 (1621)	$ 94.35 (26693)	$107.92 (114766)	$252.55	$238.98
Seattle	$296.05 (3496)	$ 76.45 (636)	$ 76.75 (10972)	$ 72.70 (27395)	$219.30	$223.35
National Total	$286.84 (88928)	$95.14 (9085)	$85.35 (514687)	$93.11 (839646)	$201.50	$193.73

TABLE 2-2.28

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: CAT SCAN OF HEAD
HCFA CODES: 70450, 70460, 70470
SPECIALTY: CLINIC, GROUP PRACTICE

Region	Office Charges (1) Global	Office Charges (2) Professional Only	Hospital Charges (3) Global	Hospital Charges (4) Professional Only	Differentials (1)-(3)	Differentials (1)-(4)
Boston	$226.97 (1765)	$63.91 (270)	. (0)	$77.20 (5743)	.	$149.77
New York	$265.72 (870)	$96.58 (66)	$80.00 (2)	$92.74 (1418)	$185.72	$172.98
Philadelphia	$320.30 (1848)	$108.89 (957)	$80.20 (1456)	$89.44 (284)	$240.10	$230.86
Atlanta	$282.93 (2390)	$84.63 (64)	. (0)	$84.83 (543)	.	$198.11
Chicago	$275.02 (1816)	$269.45 (211)	$83.42 (46349)	$74.91 (1180)	$191.60	$200.11
Dallas	$247.66 (549)	$109.41 (17)	$104.99 (626)	$121.65 (43)	$142.67	$126.01
Kansas City	$283.38 (420)	$105.50 (4)	$81.78 (622)	$78.61 (1943)	$201.60	$204.77
Denver	$330.01 (131)	$285.00 (5)	. (0)	$77.38 (53)	.	$252.63
San Francisco	$364.46 (2674)	$104.57 (258)	$142.85 (3586)	$100.04 (4511)	$221.61	$264.42
Seattle	$257.02 (205)	$80.00 (9)	$81.31 (29)	$76.22 (308)	$175.71	$180.81
National Total	$294.03 (12668)	$119.03 (1861)	$87.62 (52670)	$85.58 (16026)	$206.42	$208.45

TABLE 2-2.29

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: ECHOGRAPHY
HCFA CODES: 76700, 76705
SPECIALTY: RADIOLOGY

	Office Charges (1)	(2)	Hospital Charges (3)	(4)	Differentials (1)-(3)	(1)-(4)
Region	Global	Professional Only	Global	Professional Only		
Boston	$118.93 (7691)	$55.23 (171)	$43.69 (3545)	$54.45 (49058)	$75.24	$64.48
New York	$145.48 (27191)	$65.55 (1359)	$85.38 (4520)	$57.08 (80599)	$60.09	$88.39
Philadelphia	$111.28 (11206)	$51.95 (222)	$45.55 (68439)	$45.83 (39064)	$65.74	$65.45
Atlanta	$104.56 (22816)	$53.04 (896)	$43.42 (32911)	$44.46 (157378)	$61.14	$60.10
Chicago	$110.83 (13635)	$39.64 (56)	$43.39 (114042)	$44.86 (26491)	$67.45	$65.98
Dallas	$104.08 (10835)	$47.70 (1021)	$49.39 (52071)	$46.42 (45295)	$54.68	$57.66
Kansas City	$92.31 (2326)	$42.33 (3)	$45.34 (22111)	$43.99 (24491)	$46.97	$48.32
Denver	$88.43 (1025)	$52.40 (84)	$43.38 (3255)	$38.10 (9557)	$45.05	$50.32
San Francisco	$118.41 (17692)	$52.26 (814)	$45.73 (14957)	$51.44 (72303)	$72.68	$66.97
Seattle	$106.86 (5466)	$46.45 (322)	$54.49 (8307)	$49.45 (16347)	$52.37	$57.41
National Total	$117.83 (119883)	$54.70 (4948)	$45.92 (324158)	$48.64 (520583)	$71.91	$69.20

TABLE 2-2.30

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: ECHOGRAPHY
HCFA CODES: 76700, 76705
SPECIALTY: CLINIC, GROUP PRACTICE

Region	Office Charges (1) Global	Office Charges (2) Professional Only	Hospital Charges (3) Global	Hospital Charges (4) Professional Only	Differentials (1)-(3)	Differentials (1)-(4)
Boston	$111.00 (304)	$37.61 (234)	• (0)	$50.45 (4222)	•	$60.54
New York	$144.57 (1435)	$55.65 (48)	$112.50 (4)	$53.12 (2024)	$32.07	$91.45
Philadelphia	$113.61 (1230)	$52.44 (9)	$ 42.70 (826)	$47.85 (663)	$70.91	$65.76
Atlanta	$105.74 (814)	$59.33 (3)	• (0)	$34.58 (239)	•	$71.76
Chicago	$117.82 (4029)	$49.47 (58)	$ 53.86 (21400)	$41.87 (321)	$63.96	$75.95
Dallas	$120.43 (21)	• (0)	$ 39.23 (459)	$45.61 (28)	$81.20	$74.82
Kansas City	$ 93.34 (978)	$34.00 (1)	$ 48.27 (501)	$49.21 (1440)	$45.07	$44.13
Denver	• (0)	$36.00 (1)	• (0)	$37.67 (15)	•	•
San Francisco	$121.51 (4920)	$51.68 (399)	$ 42.91 (1811)	$51.92 (2479)	$78.60	$69.59
Seattle	$103.48 (535)	$42.67 (39)	$ 40.67 (60)	$42.52 (247)	$62.82	$60.96
National Total	$118.37 (14266)	$47.15 (792)	$52.29 (25061)	$50.17 (11678)	$66.08	$68.20

TABLE 2-2.31

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: UPPER GAST X-RAY
HCFA CODES: 74240, 74241, 74245
SPECIALTY: RADIOLOGY

	Office Charges (1)	(2)	Hospital Charges (3)	(4)	Differentials (1)-(3)	(1)-(4)
		Professional		Professional		
Region	Global	Only	Global	Only		
Boston	$ 93.00 (12484)	$37.73 (98)	$30.79 (3179)	$35.46 (51060)	$62.22	$57.55
New York	$109.49 (30707)	$44.99 (416)	$46.46 (3128)	$39.39 (80836)	$63.03	$70.11
Philadelphia	$ 93.91 (16087)	$36.41 (298)	$37.64 (61512)	$35.95 (41178)	$56.27	$57.97
Atlanta	$ 80.38 (36672)	$32.89 (1174)	$34.08 (28004)	$30.90 (187005)	$46.30	$49.48
Chicago	$ 75.20 (21990)	$43.39 (832)	$31.46 (125239)	$29.73 (48277)	$43.74	$45.47
Dallas	$ 74.48 (19693)	$30.75 (891)	$31.42 (53594)	$30.87 (47985)	$43.07	$43.61
Kansas City	$ 73.55 (4482)	$37.00 (1)	$33.42 (29860)	$29.20 (26975)	$40.12	$44.35
Denver	$ 75.26 (2626)	$37.84 (191)	$36.05 (4114)	$28.88 (14017)	$39.21	$46.38
San Francisco	$101.52 (34697)	$54.41 (1007)	$38.81 (14796)	$40.95 (66395)	$62.71	$60.57
Seattle	$ 83.50 (10145)	$39.27 (169)	$34.68 (6948)	$34.99 (15423)	$48.82	$48.52
National Total	$89.67 (189583)	$40.19 (5077)	$33.59 (330374)	$33.88 (579151)	$56.07	$55.79

TABLE 2-2.32

DIAGNOSTIC TEST MEAN CHARGES AND MEAN DIFFERENTIALS
BY PHYSICIAN SPECIALTY AND HCFA REGION
(FREQUENCIES IN PARENTHESES)
TEST: UPPER X-RAY

HCFA CODES: 74240, 74241, 74245
SPECIALTY: CLINIC, GROUP PRACTICE

	Office Charges (1)	(2)	Hospital Charges (3)	(4)	Differentials (1)-(3)	(1)-(4)
		Professional		Professional		
Region	Global	Only	Global	Only		
Boston	$ 82.67 (745)	$30.85 (173)	• (0)	$24.69 (2732)	•	$57.98
New York	$109.37 (2032)	$49.94 (35)	• (0)	$38.92 (1029)	•	$70.45
Philadelphia	$ 88.41 (1635)	$44.66 (41)	$22.88 (1207)	$31.69 (591)	$65.52	$56.71
Atlanta	$ 63.63 (735)	$25.00 (2)	• (0)	$31.74 (325)	•	$31.88
Chicago	$ 77.35 (10601)	$74.69 (222)	$32.79 (24778)	$31.62 (1394)	$44.56	$45.73
Dallas	$ 61.09 (22)	$39.00 (1)	$36.80 (498)	$29.40 (25)	$24.29	$31.69
Kansas City	$ 73.30 (1984)	$36.71 (7)	$31.76 (884)	$32.28 (1232)	$41.54	$41.02
Denver	$ 87.21 (29)	• (0)	• (0)	$29.96 (26)	•	$57.25
San Francisco	$100.78 (8608)	$52.05 (164)	$35.35 (1152)	$39.72 (2373)	$65.43	$61.06
Seattle	$ 77.51 (898)	$31.23 (30)	$33.32 (50)	$31.75 (212)	$44.19	$45.77
National Total	$87.27 (27289)	$52.32 (675)	$32.51 (28569)	$32.49 (9939)	$54.76	$54.78

TABLE 2-3

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION
OF MEAN CHARGES AND MEAN DIFFERENTIALS
ACROSS CARRIER REGIONS AND PRICING LOCATIONS
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: CHEST X-RAY (SINGLE VIEW) *

SPECIALTY	OFFICE CHARGES (1) GLOBAL	OFFICE CHARGES (2) PROF COMP	HOSPITAL CHARGES (3) GLOBAL	HOSPITAL CHARGES (4) PROF COMP	DIFFERENTIALS (1) - (3)	DIFFERENTIALS (1) - (4)
CLINIC, GROUP PRACTICE EX	5.1081 (0.1908)	5.8721 (0.3678)	4.8127 (0.5322)	1.6163 (0.1445)	7.1346 (0.5693)	18.8118 (0.9694)
RADIOLOGY	5.2320 (0.2557)	1.9465 (0.1598)	1.6249 (0.1475)	1.5259 (0.1386)	13.0844 (1.0542)	9.6213 (0.6678)
TOTAL	5.9634 (0.2656)	3.3037 (0.2578)	2.1543 (0.1986)	1.5288 (0.1388)	12.6518 (1.0185)	10.1791 (0.6972)
NATIONAL MEAN	$22.45	$12.81	$10.85	$11.02	$12.42	$14.60

* HCPCS CODES: 71010, 71015

NOTE: THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION ARE BASED ON UNWEIGHTED DEVIATIONS OF EACH CARRIER'S MEAN CHARGE FROM THE NATIONAL MEAN CHARGE.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-3

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION
OF MEAN CHARGES AND MEAN DIFFERENTIALS
ACROSS CARRIER REGIONS AND PRICING LOCATIONS
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: CHEST X-RAY (TWO VIEWS) *

	OFFICE CHARGES		HOSPITAL CHARGES		DIFFERENTIALS	
	(1)	(2)	(3)	(4)	(1) - (3)	(1) - (4)
SPECIALTY	GLOBAL	PROF COMP	GLOBAL	PROF COMP		
CLINIC, GROUP PRACTICE EX	5.2191 (0.1388)	6.4429 (0.2220)	1.7563 (0.1442)	1.5473 (0.1113)	4.9053 (0.2217)	4.1604 (0.1652)
RADIOLOGY	5.4662 (0.1491)	5.1015 (0.3005)	1.8315 (0.1284)	1.6693 (0.1195)	4.8096 (0.2429)	5.2755 (0.2446)
INTERNAL MEDICINE	4.6859 (0.1334)	9.9431 (0.4250)	4.3393 (0.2948)	1.5677 (0.1323)	8.1580 (0.5417)	3.3381 (0.1540)
TOTAL	5.1675 (0.1432)	7.9714 (0.3848)	1.9265 (0.1370)	1.6703 (0.1196)	5.8160 (0.3011)	5.0504 (0.2318)
NATIONAL MEAN	$36.08	$20.71	$14.07	$13.96	$19.31	$21.79

* HCPCS CODES. 71020, 71021, 71022, 71023, 71030, 71034, 71035

NOTE: THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION ARE BASED ON UNWEIGHTED DEVIATIONS OF EACH CARRIER'S MEAN CHARGE FROM THE NATIONAL MEAN CHARGE.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-3

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION
OF MEAN CHARGES AND MEAN DIFFERENTIALS
ACROSS CARRIER REGIONS AND PRICING LOCATIONS
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: ROUTINE EKG W/ 12 LEADS *

SPECIALTY	OFFICE CHARGES (1) GLOBAL	OFFICE CHARGES (2) PROF COMP	HOSPITAL CHARGES (3) GLOBAL	HOSPITAL CHARGES (4) PROF COMP	DIFFERENTIALS (1) - (3)	DIFFERENTIALS (1) - (4)
CLINIC, GROUP PRACTICE EX	5.9303 (0.1756)	2.4784 (0.1172)	2.2627 (0.1929)	5.6167 (0.4655)	7.9126 (0.5891)	4.6213 (0.2401)
INTERNAL MEDICINE	4.9327 (0.1547)	4.5029 (0.2449)	4.6275 (0.3650)	3.3820 (0.2562)	6.9001 (0.5989)	7.0384 (0.4930)
CARDIOVASCULAR DISEASE	7.8102 (0.2362)	7.1390 (0.3815)	2.5984 (0.2901)	2.7578 (0.3074)	9.8226 (0.5902)	8.8905 (0.4881)
TOTAL	5.9227 (0.1832)	5.3408 (0.2736)	3.0117 (0.3188)	4.7207 (0.4316)	8.4394 (0.6289)	7.8814 (0.4828)
NATIONAL MEAN	$32.33	$19.52	$9.45	$10.94	$13.42	$16.33

* HCPCS CODES: 93000

NOTE: THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION ARE BASED ON UNWEIGHTED DEVIATIONS OF EACH CARRIER'S MEAN CHARGE FROM THE NATIONAL MEAN CHARGE.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-3

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION
OF MEAN CHARGES AND MEAN DIFFERENTIALS
ACROSS CARRIER REGIONS AND PRICING LOCATIONS
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: HOLTER MONITOR *

SPECIALTY	OFFICE CHARGES (1) GLOBAL	OFFICE CHARGES (2) PROF COMP	HOSPITAL CHARGES (3) GLOBAL	HOSPITAL CHARGES (4) PROF COMP	DIFFERENTIALS (1) - (3)	DIFFERENTIALS (1) - (4)
CLINIC, GROUP PRACTICE EX	37.3907 (0.1909)	17.6376 (0.2771)	8.4396 (0.1603)	8.6271 (0.2271)	47.2845 (0.3377)	46.8957 (0.3249)
INTERNAL MEDICINE	28.1475 (0.1421)	28.9991 (0.4045)	27.1594 (0.4045)	24.5504 (0.4619)	58.9913 (0.7444)	23.0865 (0.1939)
CARDIOVASCULAR DISEASE	35.0399 (0.1703)	25.1501 (0.3173)	27.3498 (0.4088)	18.0364 (0.3065)	55.2103 (0.5445)	28.5589 (0.2225)
TOTAL	31.8856 (0.1587)	26.7481 (0.3560)	25.2376 (0.3945)	20.3822 (0.3934)	59.3051 (0.6228)	31.0687 (0.2450)
NATIONAL MEAN	$200.87	$75.13	$63.97	$51.81	$95.22	$126.79

* HCPCS CODES: 93258, 93259, 93262, 93263

NOTE: THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION ARE BASED ON UNWEIGHTED DEVIATIONS OF EACH CARRIER'S MEAN CHARGE FROM THE NATIONAL MEAN CHARGE.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-3

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION
OF MEAN CHARGES AND MEAN DIFFERENTIALS
ACROSS CARRIER REGIONS AND PRICING LOCATIONS
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: REAL TIME EKG MONITOR *

SPECIALTY	OFFICE CHARGES (1) GLOBAL	(2) PROF COMP	HOSPITAL CHARGES (3) GLOBAL	(4) PROF COMP	DIFFERENTIALS (1) - (3)	(1) - (4)
CLINIC, GROUP PRACTICE EX	11.2771 (0.0708)	. .	. .	. .	0.0000 (0.0000)	. .
INTERNAL MEDICINE	6.3000 (0.0389)	0.0000 (0.0000)	5.4079 (0.0573)	0.1518 (0.0029)	1.8029 (0.0266)	0.0000 (0.0000)
GENERAL PRACTICE	9.2055 (0.0590)	. .	4.7247 (0.0851)	0.0000 (0.0000)	6.6928 (0.1057)	0.0000 (0.0000)
TOTAL	7.3377 (0.0456)	1.9450 (0.0296)	13.8085 (0.1538)	1.2277 (0.0239)	6.7465 (0.1022)	0.9701 (0.0090)
NATIONAL MEAN	$160.82	$65.71	$89.79	$51.37	$66.03	$107.57

* HCPCS CODES: 93266

NOTE: THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION ARE BASED ON UNWEIGHTED DEVIATIONS OF EACH CARRIER'S MEAN CHARGE FROM THE NATIONAL MEAN CHARGE.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-3

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION
OF MEAN CHARGES AND MEAN DIFFERENTIALS
ACROSS CARRIER REGIONS AND PRICING LOCATIONS
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: SPIROMETRY *

SPECIALTY	OFFICE CHARGES (1) GLOBAL	(2) PROF COMP	HOSPITAL CHARGES (3) GLOBAL	(4) PROF COMP	DIFFERENTIALS (1) - (3)	(1) - (4)
CLINIC, GROUP PRACTICE EX	12.3366 (0.2968)	5.7757 (0.1668)	7.0033 (0.3238)	7.0712 (0.3974)	11.3625 (0.6266)	10.8990 (0.6836)
PULMONARY DISEASE	11.5307 (0.2718)	12.2572 (0.5575)	7.4762 (0.3692)	8.3870 (0.4151)	10.3182 (0.6374)	8.4133 (0.4459)
INTERNAL MEDICINE	14.7434 (0.3626)	6.8405 (0.3178)	9.1101 (0.4162)	6.5594 (0.3390)	11.2636 (0.8881)	11.8143 (0.7769)
TOTAL	13.8919 (0.3376)	10.7122 (0.4331)	7.8814 (0.3768)	7.6248 (0.3888)	11.1681 (0.7822)	10.9182 (0.6654)
NATIONAL MEAN	$41.15	$24.73	$20.92	$19.61	$14.28	$16.41

* HCPCS CODES: 94010, 94060, 94070

NOTE: THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION ARE BASED ON UNWEIGHTED DEVIATIONS OF EACH CARRIER'S MEAN CHARGE FROM THE NATIONAL MEAN CHARGE.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-3

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION
OF MEAN CHARGES AND MEAN DIFFERENTIALS
ACROSS CARRIER REGIONS AND PRICING LOCATIONS
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: NON-INV PER VASCULAR *

SPECIALTY	OFFICE CHARGES (1) GLOBAL	OFFICE CHARGES (2) PROF COMP	HOSPITAL CHARGES (3) GLOBAL	HOSPITAL CHARGES (4) PROF COMP	DIFFERENTIALS (1) - (3)	DIFFERENTIALS (1) - (4)
CLINIC, GROUP PRACTICE EX	38.2512 (0.3944)	21.9252 (0.6282)	20.8701 (0.4643)	15.7496 (0.5805)	26.0443 (0.4947)	27.6769 (0.7361)
THORACIC SURGERY	30.1726 (0.3023)	21.5903 (0.3749)	19.0819 (0.4124)	16.1005 (0.3792)	30.7611 (0.7689)	27.6368 (0.5220)
GENERAL SURGERY	26.5964 (0.2963)	27.2361 (0.5565)	15.5527 (0.3973)	15.7651 (0.4278)	25.7009 (0.7345)	19.1575 (0.4263)
TOTAL	29.8333 (0.3191)	26.2577 (0.5469)	18.3518 (0.4337)	16.7342 (0.4701)	27.9654 (0.6972)	23.6999 (0.5210)
NATIONAL MEAN	$93.48	$48.01	$42.32	$35.60	$40.11	$45.49

* HCPCS CODES: 93850, 93860, 93890, 93910, 93950, 93960

NOTE: THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION ARE BASED ON UNWEIGHTED DEVIATIONS OF EACH CARRIER'S MEAN CHARGE FROM THE NATIONAL MEAN CHARGE.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-3

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION
OF MEAN CHARGES AND MEAN DIFFERENTIALS
ACROSS CARRIER REGIONS AND PRICING LOCATIONS
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: ORTHO X-RAY (PELVIS) *

SPECIALTY	OFFICE CHARGES (1) GLOBAL	OFFICE CHARGES (2) PROF COMP	HOSPITAL CHARGES (3) GLOBAL	HOSPITAL CHARGES (4) PROF COMP	DIFFERENTIALS (1) - (3)	DIFFERENTIALS (1) - (4)
CLINIC, GROUP PRACTICE EX	6.0325 (0.1853)	6.3607 (0.3072)	4.3544 (0.4434)	1.8473 (0.1357)	12.6221 (0.7623)	8.6052 (0.3597)
RADIOLOGY	7.5895 (0.2260)	3.1038 (0.2334)	3.2655 (0.2465)	1.9684 (0.1509)	7.2011 (0.4474)	5.0467 (0.2715)
ORTHOPEDIC SURGERY	5.9303 (0.1893)	3.0916 (0.1805)	66.9732 (1.4980)	3.0429 (0.2121)	15.1687 (1.3620)	6.7236 (0.4008)
TOTAL	6.4770 (0.2025)	5.0824 (0.3293)	4.7128 (0.3620)	1.9717 (0.1510)	10.7875 (0.7332)	5.7982 (0.3150)
NATIONAL MEAN	$31.98	$15.43	$13.02	$13.06	$14.71	$18.41

* HCPCS CODES: 72170, 72180, 72190

NOTE: THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION ARE BASED ON UNWEIGHTED DEVIATIONS OF EACH CARRIER'S MEAN CHARGE FROM THE NATIONAL MEAN CHARGE.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-3

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION
OF MEAN CHARGES AND MEAN DIFFERENTIALS
ACROSS CARRIER REGIONS AND PRICING LOCATIONS
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: ORTHO X-RAY (SHOULDER) *

	OFFICE CHARGES		HOSPITAL CHARGES		DIFFERENTIALS	
	(1)	(2)	(3)	(4)	(1) - (3)	(1) - (4)
SPECIALTY	GLOBAL	PROF COMP	GLOBAL	PROF COMP		
CLINIC, GROUP PRACTICE EX	5.2353 (0.1538)	8.4293 (0.3141)	1.7650 (0.1521)	2.2106 (0.1779)	3.8359 (0.1833)	4.7264 (0.2102)
RADIOLOGY	6.3571 (0.1814)	3.1662 (0.2192)	1.7243 (0.1332)	1.9211 (0.1441)	4.5872 (0.2412)	5.4241 (0.2641)
ORTHOPEDIC SURGERY	5.3287 (0.1619)	4.1331 (0.2586)	6.8655 (0.3659)	3.0344 (0.2079)	7.3677 (0.5154)	4.2547 (0.2135)
TOTAL	5.6767 (0.1692)	7.6562 (0.4203)	1.8280 (0.1422)	1.9400 (0.1458)	6.0622 (0.3427)	5.1031 (0.2492)
NATIONAL MEAN	$33.56	$18.21	$12.86	$13.31	$17.69	$20.48

* HCPCS CODES: 73020, 73030

NOTE: THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION ARE BASED ON UNWEIGHTED DEVIATIONS OF EACH CARRIER'S MEAN CHARGE FROM THE NATIONAL MEAN CHARGE.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-3

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION
OF MEAN CHARGES AND MEAN DIFFERENTIALS
ACROSS CARRIER REGIONS AND PRICING LOCATIONS
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: ORTHO X-RAY (HIP) *

SPECIALTY	OFFICE CHARGES (1) GLOBAL	(2) PROF COMP	HOSPITAL CHARGES (3) GLOBAL	(4) PROF COMP	DIFFERENTIALS (1) - (3)	(1) - (4)
CLINIC, GROUP PRACTICE EX	6.4737 (0.1645)	8.6304 (0.2877)	2.8078 (0.1973)	3.8661 (0.2507)	5.5409 (0.2179)	5.7905 (0.2204)
RADIOLOGY	8.0441 (0.1994)	4.1164 (0.2425)	2.1228 (0.1434)	2.6618 (0.1707)	5.3705 (0.2532)	6.6904 (0.2783)
ORTHOPEDIC SURGERY	6.4187 (0.1738)	4.7589 (0.2457)	9.6406 (0.4381)	6.2002 (0.3408)	7.8485 (0.4798)	4.3545 (0.2070)
TOTAL	6.9459 (0.1837)	7.8438 (0.3854)	2.3379 (0.1580)	2.7245 (0.1746)	6.9476 (0.3512)	6.2361 (0.2683)
NATIONAL MEAN	$37.81	$20.35	$14.80	$15.60	$19.78	$23.25

* HCPCS CODES: 73500, 73510, 73520

NOTE: THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION ARE BASED ON UNWEIGHTED DEVIATIONS OF EACH CARRIER'S MEAN CHARGE FROM THE NATIONAL MEAN CHARGE.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-3

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION
OF MEAN CHARGES AND MEAN DIFFERENTIALS
ACROSS CARRIER REGIONS AND PRICING LOCATIONS
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: ORTHO X-RAY (KNEE) *

SPECIALTY	OFFICE CHARGES (1) GLOBAL	OFFICE CHARGES (2) PROF COMP	HOSPITAL CHARGES (3) GLOBAL	HOSPITAL CHARGES (4) PROF COMP	DIFFERENTIALS (1) - (3)	DIFFERENTIALS (1) - (4)
CLINIC, GROUP PRACTICE EX	4.6575 (0.1379)	7.3220 (0.5520)	2.1001 (0.1788)	1.8977 (0.1476)	3.8003 (0.1709)	4.4635 (0.2023)
RADIOLOGY	6.0286 (0.1774)	2.5193 (0.1813)	2.0672 (0.1587)	1.9282 (0.1468)	4.6617 (0.2525)	5.1171 (0.2538)
ORTHOPEDIC SURGERY	5.2528 (0.1644)	3.6273 (0.2305)	8.3317 (0.4051)	2.2670 (0.1668)	7.1833 (0.5068)	5.2093 (0.2844)
TOTAL	5.4423 (0.1675)	3.7069 (0.2618)	2.2328 (0.1721)	1.9294 (0.1470)	6.3783 (0.3766)	5.2320 (0.2678)
NATIONAL MEAN	$32.49	$14.16	$12.97	$13.12	$16.94	$19.54

* HCPCS CODES: 73560, 73562, 73564

NOTE: THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION ARE BASED ON UNWEIGHTED DEVIATIONS OF EACH CARRIER'S MEAN CHARGE FROM THE NATIONAL MEAN CHARGE.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-3

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION
OF MEAN CHARGES AND MEAN DIFFERENTIALS
ACROSS CARRIER REGIONS AND PRICING LOCATIONS
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: ORTHO X-RAY (FOOT) *

SPECIALTY	OFFICE CHARGES (1) GLOBAL	OFFICE CHARGES (2) PROF COMP	HOSPITAL CHARGES (3) GLOBAL	HOSPITAL CHARGES (4) PROF COMP	DIFFERENTIALS (1) - (3)	DIFFERENTIALS (1) - (4)
CLINIC, GROUP PRACTICE EX	4.5924 (0.1485)	8.7841 (0.3562)	2.0237 (0.1890)	2.3232 (0.1969)	3.5760 (0.1926)	3.9923 (0.1966)
PODIATRY SURGICAL CHIRO	4.6616 (0.1560)	11.2171 (0.5582)	8.6207 (0.3902)	2.0377 (0.1694)	8.0747 (0.6943)	3.9644 (0.2247)
RADIOLOGY	5.5837 (0.1798)	2.4725 (0.1886)	1.7423 (0.1478)	1.8308 (0.1461)	3.5180 (0.2126)	4.5473 (0.2479)
TOTAL	4.7681 (0.1587)	8.7068 (0.5030)	2.4321 (0.2051)	1.8534 (0.1482)	7.3203 (0.5464)	4.2530 (0.2357)
NATIONAL MEAN	$30.04	$17.31	$11.86	$12.51	$13.40	$18.05

* HCPCS CODES: 73620, 73630

NOTE: THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION ARE BASED ON UNWEIGHTED DEVIATIONS OF EACH CARRIER'S MEAN CHARGE FROM THE NATIONAL MEAN CHARGE.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-3

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION
OF MEAN CHARGES AND MEAN DIFFERENTIALS
ACROSS CARRIER REGIONS AND PRICING LOCATIONS
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: OPTHAL BIOMETRY BY ULTRA-BIL *

SPECIALTY	OFFICE CHARGES (1) GLOBAL	(2) PROF COMP	HOSPITAL CHARGES (3) GLOBAL	(4) PROF COMP	DIFFERENTIALS (1) - (3)	(1) - (4)
CLINIC, GROUP PRACTICE EX	28.6154 (0.2236)	37.0051 (0.4932)	14.7976 (0.1853)	34.3005 (0.3542)	28.6265 (0.6817)	30.8510 (0.7440)
OPTHAMOLOGY	30.5119 (0.2295)	25.1822 (0.3208)	22.9247 (0.2808)	29.9846 (0.4090)	48.1926 (1.2907)	35.2336 (0.5881)
TOTAL	30.4914 (0.2294)	25.4095 (0.3239)	22.8235 (0.2796)	30.1956 (0.4098)	48.0045 (1.2837)	35.2402 (0.5901)
NATIONAL MEAN	$132.89	$78.44	$81.63	$73.69	$37.40	$59.72

* HCPCS CODES: 76516

NOTE: THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION ARE BASED ON UNWEIGHTED DEVIATIONS OF EACH CARRIER'S MEAN CHARGE FROM THE NATIONAL MEAN CHARGE.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-3

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION
OF MEAN CHARGES AND MEAN DIFFERENTIALS
ACROSS CARRIER REGIONS AND PRICING LOCATIONS
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: CAT SCAN OF HEAD *

SPECIALTY	OFFICE CHARGES (1) GLOBAL	OFFICE CHARGES (2) PROF COMP	HOSPITAL CHARGES (3) GLOBAL	HOSPITAL CHARGES (4) PROF COMP	DIFFERENTIALS (1) - (3)	DIFFERENTIALS (1) - (4)
CLINIC, GROUP PRACTICE EX	60.6607 (0.2063)	60.5586 (0.5090)	25.6539 (0.2928)	16.4994 (0.1928)	51.8823 (0.3000)	66.8768 (0.3759)
RADIOLOGY	60.0818 (0.2095)	14.6693 (0.1542)	22.6687 (0.2656)	16.7663 (0.1801)	52.3029 (0.3213)	62.5439 (0.3432)
TOTAL	60.2005 (0.2092)	29.7008 (0.2995)	22.9716 (0.2685)	16.7924 (0.1806)	52.3467 (0.3198)	62.6774 (0.3442)
NATIONAL MEAN	$287.74	$99.17	$85.56	$92.97	$163.70	$182.10

* HCPCS CODES: 70450, 70460, 70470

NOTE: THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION ARE BASED ON UNWEIGHTED DEVIATIONS OF EACH CARRIER'S MEAN CHARGE FROM THE NATIONAL MEAN CHARGE.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-3

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION
OF MEAN CHARGES AND MEAN DIFFERENTIALS
ACROSS CARRIER REGIONS AND PRICING LOCATIONS
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: ECHOGRAPHY *

SPECIALTY	OFFICE CHARGES (1) GLOBAL	OFFICE CHARGES (2) PROF COMP	HOSPITAL CHARGES (3) GLOBAL	HOSPITAL CHARGES (4) PROF COMP	DIFFERENTIALS (1) - (3)	DIFFERENTIALS (1) - (4)
CLINIC, GROUP PRACTICE EX	18.5756 (0.1569)	9.9808 (0.2117)	5.4791 (0.1048)	5.9629 (0.1189)	21.6394 (0.2875)	23.0514 (0.3619)
RADIOLOGY	26.6287 (0.2260)	9.3852 (0.1716)	8.9590 (0.1951)	7.3947 (0.1520)	18.1420 (0.3510)	18.1469 (0.3114)
TOTAL	25.8920 (0.2196)	9.8200 (0.1830)	8.9085 (0.1921)	7.3697 (0.1514)	19.5352 (0.3646)	18.3613 (0.3141)
NATIONAL MEAN	$117.89	$53.66	$46.38	$48.67	$53.59	$58.46

* HCPCS CODES. 76700, 76705

NOTE: THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION ARE BASED ON UNWEIGHTED DEVIATIONS OF EACH CARRIER'S MEAN CHARGE FROM THE NATIONAL MEAN CHARGE.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-3

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION
OF MEAN CHARGES AND MEAN DIFFERENTIALS
ACROSS CARRIER REGIONS AND PRICING LOCATIONS
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: UPPER GI X-RAY *

SPECIALTY	OFFICE CHARGES (1) GLOBAL	(2) PROF COMP	HOSPITAL CHARGES (3) GLOBAL	(4) PROF COMP	DIFFERENTIALS (1) - (3)	(1) - (4)
CLINIC, GROUP PRACTICE EX	15.9513 (0.1828)	19.5228 (0.3731)	6.7288 (0.2070)	7.3723 (0.2269)	14.7020 (0.3050)	12.5918 (0.2312)
RADIOLOGY	17.7339 (0.1978)	13.8047 (0.3434)	4.2396 (0.1262)	5.6839 (0.1678)	12.3815 (0.2731)	13.8404 (0.2856)
TOTAL	17.5375 (0.1962)	15.1033 (0.3629)	4.4981 (0.1342)	5.7193 (0.1689)	12.6469 (0.2773)	13.8426 (0.2843)
NATIONAL MEAN	$89.36	$41.62	$33.51	$33.85	$45.60	$48.70

* HCPCS CODES: 74240, 74241, 74245

NOTE: THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION ARE BASED ON UNWEIGHTED DEVIATIONS OF EACH CARRIER'S MEAN CHARGE FROM THE NATIONAL MEAN CHARGE.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-5

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION
OF MEAN CHARGES AND MEAN DIFFERENTIALS across pricing localities
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: CHEST X-RAY (SINGLE VIEW) *

SPECIALTY	OFFICE CHARGES (1) GLOBAL	(2) PROF COMP	HOSPITAL CHARGES (3) GLOBAL	(4) PROF COMP	DIFFERENTIALS (1) - (3)	(1) - (4)
CLINIC, GROUP PRACTICE EX	2.3689 (0.0879)	0.3260 (0.0204)	0.7766 (0.0673)	0.4518 (0.0442)	2.1118 (0.2340)	2.9293 (0.1656)
RADIOLOGY	2.8731 (0.1485)	0.9723 (0.0738)	1.0267 (0.0932)	0.5818 (0.0534)	3.5183 (0.3995)	3.1796 (0.1877)
INTERNAL MEDICINE	1.4848 (0.0529)	0.3135 (0.0250)	1.0272 (0.1030)	0.4286 (0.0497)	1.4669 (0.0304)	1.1194 (0.0668)
GENERAL PRACTICE	1.0692 (0.0441)	0.5635 (0.0514)	1.9105 (0.2322)	0.2740 (0.0379)	1.5794 (0.1087)	0.9546 (0.0682)
TOTAL	1.7924 (0.0751)	0.8086 (0.0610)	1.0116 (0.0919)	0.5771 (0.0531)	3.2316 (0.3568)	3.0007 (0.1772)
NATIONAL MEAN	$25.29	$12.90	$10.83	$11.01	$12.27	$14.71

* HCPCS CODES: 71010, 71015

NOTE: THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION WITHIN CARRIERS ARE NATIONAL WEIGHTED AVERAGES. SD AND CV FOR THE DEVIATION OF THE PRICING LOCALITY MEAN FROM THE MEAN OF THE CARRIER IN WHICH IT IS LOCATED, WERE WEIGHED BY THE CARRIER RELATIVE VOLUME.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-5

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION
OF MEAN CHARGES AND MEAN DIFFERENTIALS across pricing localities
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: CHEST X-RAY (TWO VIEWS) *

SPECIALTY	OFFICE CHARGES (1) GLOBAL	OFFICE CHARGES (2) PROF COMP	HOSPITAL CHARGES (3) GLOBAL	HOSPITAL CHARGES (4) PROF COMP	DIFFERENTIALS (1) - (3)	DIFFERENTIALS (1) - (4)
CLINIC, GROUP PRACTICE EX	2.2489 (0.0605)	1.6714 (0.0569)	0.6072 (0.0522)	0.8561 (0.0582)	2.3464 (0.1092)	2.4633 (0.0982)
RADIOLOGY	1.8355 (0.0518)	2.2000 (0.0969)	1.1322 (0.0798)	0.6949 (0.0487)	2.5172 (0.1693)	2.0102 (0.1166)
INTERNAL MEDICINE	1.6041 (0.0454)	0.6627 (0.0345)	1.7166 (0.0988)	0.4982 (0.0421)	3.6028 (0.5358)	1.2334 (0.0556)
FAMILY PRACTICE	1.6970 (0.0519)	2.7101 (0.1003)	1.4332 (0.1426)	0.7177 (0.0591)	3.2335 (0.0908)	1.2595 (0.0852)
TOTAL	1.7734 (0.0502)	2.0198 (0.0835)	1.0851 (0.0774)	0.6982 (0.0489)	2.6938 (0.2136)	1.8974 (0.1059)
NATIONAL MEAN	$35.73	$21.19	$14.06	$13.96	$19.13	$21.73

* HCPCS CODES: 71020, 71021, 71022, 71023, 71030, 71034, 71035

NOTE: THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION WITHIN CARRIERS ARE NATIONAL WEIGHTED AVERAGES. SD AND CV FOR THE DEVIATION OF THE PRICING LOCALITY MEAN FROM THE MEAN OF THE CARRIER IN WHICH IT IS LOCATED, WERE WEIGHED BY THE CARRIER RELATIVE VOLUME.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-5

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION
OF MEAN CHARGES AND MEAN DIFFERENTIALS across pricing localities
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: ROUTINE EKG W/ 12 LEADS *

SPECIALTY	OFFICE CHARGES (1) GLOBAL	OFFICE CHARGES (2) PROF COMP	HOSPITAL CHARGES (3) GLOBAL	HOSPITAL CHARGES (4) PROF COMP	DIFFERENTIALS (1) - (3)	DIFFERENTIALS (1) - (4)
CLINIC, GROUP PRACTICE EX	1.9828 (0.0595)	2.3421 (0.0999)	2.8014 (0.2478)	0.7689 (0.0568)	4.4671 (0.4583)	3.0351 (0.1875)
INTERNAL MEDICINE	1.2800 (0.0395)	3.2287 (0.1545)	2.7285 (0.2239)	1.4624 (0.1153)	4.2503 (0.6241)	2.0926 (0.3587)
FAMILY PRACTICE	1.2961 (0.0430)	1.8819 (0.1023)	2.8773 (0.1993)	1.1556 (0.0837)	2.3072 (0.6547)	2.2493 (0.8045)
CARDIOVASCULAR DISEASE	1.9699 (0.0745)	2.8433 (0.1839)	1.7958 (0.1955)	4.0715 (0.4978)	4.4760 (0.4421)	3.9605 (0.2810)
GENERAL PRACTICE	1.3112 (0.0426)	1.9361 (0.0965)	1.2505 (0.0999)	0.6194 (0.0425)	36.4089 (Z)	2.5423 (0.1808)
TOTAL	1.4658 (0.0485)	2.6601 (0.1407)	1.9343 (0.1998)	2.1632 (0.2390)	7.1030 (0.4297)	2.8131 (0.3410)
NATIONAL MEAN	$31.91	$19.43	$9.53	$11.00	$9.79	$16.44

* HCPCS CODES: 93000

NOTES: (1) THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION WITHIN CARRIERS ARE NATIONAL WEIGHTED AVERAGES. SD AND CV FOR THE DEVIATION OF THE PRICING LOCALITY MEAN FROM THE MEAN OF THE CARRIER IN WHICH IT IS LOCATED, WERE WEIGHED BY THE CARRIER RELATIVE VOLUME.

(2) WE SUBSTITUTED Z FOR NEGATIVE VALUES WHICH OCCUR WHEN THE DERIVED TECHNICAL DIFFERENTIAL IS NEGATIVE.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-5

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION
OF MEAN CHARGES AND MEAN DIFFERENTIALS across pricing localities
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: HOLTER MONITOR *

SPECIALTY	OFFICE CHARGES (1) GLOBAL	(2) PROF COMP	HOSPITAL CHARGES (3) GLOBAL	(4) PROF COMP	DIFFERENTIALS (1) - (3)	(1) - (4)
CLINIC, GROUP PRACTICE EX	14.7812 (0.0774)	2.9583 (0.0391)	6.6132 (0.1343)	2.3286 (0.0594)	20.9546 (0.1650)	9.7119 (0.1535)
INTERNAL MEDICINE	11.0168 (0.0555)	12.5870 (0.1572)	15.8702 (0.2413)	10.3995 (0.2226)	28.0614 (Z)	15.9230 (0.1481)
FAMILY PRACTICE	12.6217 (0.0598)	8.3583 (0.1469)	11.3448 (0.1856)	7.3006 (0.0956)	16.8210 (Z)	11.9867 (0.2111)
CARDIOVASCULAR DISEASE	11.7405 (0.0562)	7.4224 (0.0887)	9.6843 (0.1489)	9.1490 (0.1494)	19.7687 (0.2535)	17.1930 (0.1456)
TOTAL	11.6724 (0.0575)	9.1285 (0.1141)	10.8755 (0.1733)	7.7755 (0.1478)	23.2530 (Z)	15.4532 (0.1504)
NATIONAL MEAN	$201.38	$74.10	$63.99	$51.85	$95.71	$125.95

* HCPCS CODES: 93258, 93259, 93262, 93263

NOTES: (1) THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION WITHIN CARRIERS ARE NATIONAL WEIGHTED AVERAGES. SD AND CV FOR THE DEVIATION OF THE PRICING LOCALITY MEAN FROM THE MEAN OF THE CARRIER IN WHICH IT IS LOCATED, WERE WEIGHED BY THE CARRIER RELATIVE VOLUME.

(2) WE SUBSTITUTED Z FOR NEGATIVE VALUES WHICH OCCUR WHEN THE DERIVED TECHNICAL DIFFERENTIAL IS NEGATIVE.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-5

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION
OF MEAN CHARGES AND MEAN DIFFERENTIALS across pricing localities
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: REAL TIME EKG MONITOR *

	OFFICE CHARGES		HOSPITAL CHARGES		DIFFERENTIALS	
	(1)	(2)	(3)	(4)	(1) - (3)	(1) - (4)
SPECIALTY	GLOBAL	PROF COMP	GLOBAL	PROF COMP		
CLINIC, GROUP PRACTICE EX	5.5399	.	.	.	42.8608	.
	(0.0348)	.	.	.	(1.3226)	.
INTERNAL MEDICINE	13.5952	7.2570	21.6132	1.9401	19.5171	15.2451
	(0.0840)	(0.1098)	(0.2298)	(0.0377)	(0.2884)	(0.1421)
CARDIOVASCULAR DISEASE	31.0258	.	.	12.9694	22.4423	11.4487
	(0.1180)	.	.	(0.2902)	(0.2415)	(0.0751)
GENERAL PRACTICE	7.6491	.	33.2277	5.7839	31.6535	10.3555
	(0.0490)	.	(0.6020)	(0.1410)	(0.5043)	(0.0932)
TOTAL	12.6975	7.1897	23.0557	2.0605	21.8813	14.9057
	(0.0776)	(0.1096)	(0.2713)	(0.0406)	(0.3473)	(0.1387)
NATIONAL MEAN	$162.10	$65.53	$90.25	$51.32	$66.77	$107.60

* HCPCS CODES: 93266

NOTE: THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION WITHIN CARRIERS ARE NATIONAL WEIGHTED AVERAGES. SD AND CV FOR THE DEVIATION OF THE PRICING LOCALITY MEAN FROM THE MEAN OF THE CARRIER IN WHICH IT IS LOCATED, WERE WEIGHED BY THE CARRIER RELATIVE VOLUME.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-5

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION
OF MEAN CHARGES AND MEAN DIFFERENTIALS across pricing localities
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: SPIROMETRY *

SPECIALTY	OFFICE CHARGES (1) GLOBAL	(2) PROF COMP	HOSPITAL CHARGES (3) GLOBAL	(4) PROF COMP	DIFFERENTIALS (1) - (3)	(1) - (4)
CLINIC, GROUP PRACTICE EX	5.8184 (0.1475)	3.8312 (0.1185)	5.6997 (0.2405)	3.1217 (0.1304)	8.0049 (0.8095)	7.1215 (4.5796)
PULMONARY DISEASE	5.4867 (0.1237)	2.9982 (0.1162)	3.6249 (0.1742)	2.6373 (0.1374)	6.8600 (0.5644)	6.2037 (0.3535)
INTERNAL MEDICINE	4.4436 (0.1125)	2.4749 (0.1082)	4.6745 (0.2211)	2.3958 (0.1304)	5.6497 (1.6285)	5.2707 (0.5675)
FAMILY PRACTICE	4.7949 (0.1228)	7.2278 (0.2155)	3.7740 (0.1818)	5.1733 (0.2229)	4.8294 (25.6040)	5.0354 (0.4173)
GENERAL PRACTICE	4.3295 (0.1065)	3.5237 (0.1000)	6.6140 (0.4130)	1.3274 (0.1079)	8.7206 (z)	5.6203 (0.4130)
TOTAL	4.7360 (0.1170)	3.0639 (0.1147)	4.3041 (0.2019)	2.5900 (0.1339)	6.3823 (2.6710)	5.6598 (0.7730)
NATIONAL MEAN	$41.95	$24.90	$20.85	$19.58	$14.34	$16.30

* HCPCS CODES: 94010, 94060, 94070

NOTES: (1) THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION WITHIN CARRIERS ARE NATIONAL WEIGHTED AVERAGES. SD AND CV FOR THE DEVIATION OF THE PRICING LOCALITY MEAN FROM THE MEAN OF THE CARRIER IN WHICH IT IS LOCATED, WERE WEIGHED BY THE CARRIER RELATIVE VOLUME.

(2) WE SUBSTITUTED Z FOR NEGATIVE VALUES WHICH OCCUR WHEN THE DERIVED TECHNICAL DIFFERENTIAL IS NEGATIVE.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-5

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION,
OF MEAN CHARGES AND MEAN DIFFERENTIALS across pricing localities
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: NON-INV PER VASCULAR *

SPECIALTY	OFFICE CHARGES (1) GLOBAL	OFFICE CHARGES (2) PROF COMP	HOSPITAL CHARGES (3) GLOBAL	HOSPITAL CHARGES (4) PROF COMP	DIFFERENTIALS (1) - (3)	DIFFERENTIALS (1) - (4)
CLINIC, GROUP PRACTICE EX	17.2264 (0.2109)	9.0750 (0.1737)	7.9463 (0.1841)	3.5856 (0.0801)	21.2085 (0.4227)	16.8050 (1.0820)
THORACIC SURGERY	15.5487 (0.1672)	12.7380 (0.2384)	11.7928 (0.3065)	8.2712 (0.1866)	20.1699 (2.8555)	11.3919 (0.3267)
INTERNAL MEDICINE	13.3612 (0.1378)	8.7878 (0.1382)	10.5811 (0.2585)	4.6278 (0.1440)	13.1987 (0.8659)	11.9456 (0.3742)
CARDIOVASCULAR DISEASE	12.8126 (0.1103)	5.7533 (0.0941)	12.9897 (0.3366)	8.8868 (0.1698)	21.4670 (0.4417)	14.9474 (0.3329)
GENERAL SURGERY	13.3136 (0.1587)	6.5749 (0.1400)	9.2073 (0.2567)	3.2739 (0.0823)	13.7176 (0.6021)	10.2571 (0.2896)
TOTAL	14.0065 (0.1540)	8.1270 (0.1582)	10.1802 (0.2640)	5.0163 (0.1176)	17.0660 (0.9514)	12.1947 (0.4193)
NATIONAL MEAN	$97.59	$49.24	$42.14	$35.92	$44.01	$48.60

* HCPCS CODES: 93850, 93860, 93890, 93910, 93950, 93960

NOTE: THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION WITHIN CARRIERS ARE NATIONAL WEIGHTED AVERAGES. SD AND CV FOR THE DEVIATION OF THE PRICING LOCALITY MEAN FROM THE MEAN OF THE CARRIER IN WHICH IT IS LOCATED, WERE WEIGHED BY THE CARRIER RELATIVE VOLUME.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-5

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION
OF MEAN CHARGES AND MEAN DIFFERENTIALS across pricing localities
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: ORTHO X-RAY (PELVIS) *

	OFFICE CHARGES		HOSPITAL CHARGES		DIFFERENTIALS	
	(1)	(2)	(3)	(4)	(1) - (3)	(1) - (4)
SPECIALTY	GLOBAL	PROF COMP	GLOBAL	PROF COMP		
CLINIC, GROUP PRACTICE EX	3.1647 (0.0929)	0.5927 (0.0280)	1.0246 (0.0653)	1.2315 (0.0909)	5.0343 (0.1119)	5.2682 (0.1714)
RADIOLOGY	3.4160 (0.0929)	1.0267 (0.0674)	1.8094 (0.1292)	0.7338 (0.0546)	4.1423 (0.3135)	2.5691 (0.1443)
ORTHOPEDIC SURGERY	2.1244 (0.0694)	0.7872 (0.0440)	12.8389 (0.1612)	0.7293 (0.0510)	6.8813 (Z)	1.2324 (0.0686)
INTERNAL MEDICINE	2.0866 (0.0664)	0.4720 (0.0245)	1.7499 (0.1511)	0.8983 (0.0819)	1.7446 (0.1148)	1.0507 (0.0674)
TOTAL	2.4703 (0.0757)	0.8874 (0.0548)	1.7641 (0.1240)	0.7462 (0.0555)	4.8419 (0.1771)	2.3234 (0.1259)
NATIONAL MEAN	$31.80	$15.48	$13.02	$13.05	$14.80	$18.35

* HCPCS CODES: 72170, 72180, 72190

NOTES: (1) THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION WITHIN CARRIERS ARE NATIONAL WEIGHTED AVERAGES. SD AND CV FOR THE DEVIATION OF THE PRICING LOCALITY MEAN FROM THE MEAN OF THE CARRIER IN WHICH IT IS LOCATED, WERE WEIGHED BY THE CARRIER RELATIVE VOLUME.

(2) WE SUBSTITUTED Z FOR NEGATIVE VALUES WHICH OCCUR WHEN THE DERIVED TECHNICAL DIFFERENTIAL IS NEGATIVE.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-5

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION
OF MEAN CHARGES AND MEAN DIFFERENTIALS across pricing localities
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: ORTHO X-RAY (SHOULDER) *

	OFFICE CHARGES		HOSPITAL CHARGES		DIFFERENTIALS	
	(1)	(2)	(3)	(4)	(1) - (3)	(1) - (4)
SPECIALTY	GLOBAL	PROF COMP	GLOBAL	PROF COMP		
CLINIC, GROUP PRACTICE EX	1.8165 (0.0539)	1.4157 (0.0518)	0.8555 (0.0772)	0.8612 (0.0646)	1.6235 (0.0769)	2.0349 (0.0896)
RADIOLOGY	2.2511 (0.0663)	1.0836 (0.0645)	1.1347 (0.0882)	0.6712 (0.0493)	3.3244 (0.1992)	2.2502 (0.1307)
ORTHOPEDIC SURGERY	1.8385 (0.0559)	0.8521 (0.0472)	2.5877 (0.1360)	0.8712 (0.0607)	2.8106 (0.4537)	1.5674 (0.0661)
INTERNAL MEDICINE	2.1516 (0.0674)	0.6667 (0.0384)	1.3717 (0.1150)	0.5882 (0.0561)	3.1389 (0.1916)	1.1094 (0.0541)
TOTAL	1.9673 (0.0595)	1.1284 (0.0577)	1.1174 (0.0875)	0.6765 (0.0497)	3.0103 (0.2645)	1.9832 (0.1062)
NATIONAL MEAN	$33.44	$18.12	$12.86	$13.30	$17.70	$20.48

* HCPCS CODES: 73020, 73030

NOTE: THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION WITHIN CARRIERS ARE NATIONAL WEIGHTED AVERAGES. SD AND CV FOR THE DEVIATION OF THE PRICING LOCALITY MEAN FROM THE MEAN OF THE CARRIER IN WHICH IT IS LOCATED, WERE WEIGHED BY THE CARRIER RELATIVE VOLUME.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-5

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION
OF MEAN CHARGES AND MEAN DIFFERENTIALS across pricing localities
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: ORTHO X-RAY (HIP) *

SPECIALTY	OFFICE CHARGES (1) GLOBAL	OFFICE CHARGES (2) PROF COMP	HOSPITAL CHARGES (3) GLOBAL	HOSPITAL CHARGES (4) PROF COMP	DIFFERENTIALS (1) - (3)	DIFFERENTIALS (1) - (4)
CLINIC, GROUP PRACTICE EX	3.1393 (0.0802)	1.2198 (0.0430)	1.7384 (0.1214)	1.3459 (0.0839)	3.2764 (0.1396)	2.9082 (0.1023)
RADIOLOGY	2.8905 (0.0766)	1.3358 (0.0693)	1.5618 (0.1088)	0.8802 (0.0548)	4.1539 (0.2277)	2.3360 (0.1837)
ORTHOPEDIC SURGERY	2.5107 (0.0680)	1.6346 (0.0825)	3.0595 (0.1132)	1.0564 (0.0601)	3.0909 (0.2216)	1.3894 (0.0643)
INTERNAL MEDICINE	2.6403 (0.0711)	1.3150 (0.0480)	1.5028 (0.1236)	0.8484 (0.0737)	2.3350 (0.1172)	2.1464 (0.0880)
TOTAL	2.6327 (0.0707)	1.3361 (0.0639)	1.5817 (0.1097)	0.8919 (0.0555)	3.6771 (0.2166)	2.0815 (0.1434)
NATIONAL MEAN	$37.79	$20.50	$14.80	$15.59	$19.81	$23.25

* HCPCS CODES: 73500, 73510, 73520

NOTE: THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION WITHIN CARRIERS ARE NATIONAL WEIGHTED AVERAGES. SD AND CV FOR THE DEVIATION OF THE PRICING LOCALITY MEAN FROM THE MEAN OF THE CARRIER IN WHICH IT IS LOCATED, WERE WEIGHED BY THE CARRIER RELATIVE VOLUME.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-5

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION OF MEAN CHARGES AND MEAN DIFFERENTIALS **across pricing localities** BY PHYSICIAN SPECIALTY AND LOCATION (COEF OF VAR IN PARENTHESIS) TEST: ORTHO X-RAY (KNEE) *

SPECIALTY	OFFICE CHARGES (1) GLOBAL	(2) PROF COMP	HOSPITAL CHARGES (3) GLOBAL	(4) PROF COMP	DIFFERENTIALS (1) - (3)	(1) - (4)
CLINIC, GROUP PRACTICE EX	2.5112 (0.0757)	0.7691 (0.0513)	0.5285 (0.0465)	1.0437 (0.0790)	2.5297 (0.1296)	2.5262 (0.1104)
RADIOLOGY	2.5812 (0.0785)	0.9949 (0.0651)	1.0532 (0.0826)	0.7184 (0.0532)	3.6000 (0.2260)	2.4726 (0.1364)
ORTHOPEDIC SURGERY	2.0703 (0.0643)	1.5318 (0.0904)	3.1293 (0.1465)	1.0856 (0.0783)	2.9063 (0.1410)	1.6795 (0.0578)
INTERNAL MEDICINE	2.4532 (0.0795)	0.7617 (0.0419)	1.1779 (0.1709)	0.7556 (0.0750)	3.4921 (Z)	1.6822 (0.0921)
TOTAL	2.2276 (0.0691)	1.0448 (0.0662)	1.0258 (0.0806)	0.7287 (0.0541)	3.2296 (0.1450)	2.1310 (0.1029)
NATIONAL MEAN	$32.37	$14.59	$12.95	$13.12	$16.96	$19.48

* HCPCS CODES: 73560, 73562, 73564

NOTES: (1) THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION WITHIN CARRIERS ARE NATIONAL WEIGHTED AVERAGES. SD AND CV FOR THE DEVIATION OF THE PRICING LOCALITY MEAN FROM THE MEAN OF THE CARRIER IN WHICH IT IS LOCATED, WERE WEIGHED BY THE CARRIER RELATIVE VOLUME.

(2) WE SUBSTITUTED Z FOR NEGATIVE VALUES WHICH OCCUR WHEN THE DERIVED TECHNICAL DIFFERENTIAL IS NEGATIVE.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-5

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION
OF MEAN CHARGES AND MEAN DIFFERENTIALS across pricing localities
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: ORTHO X-RAY (FOOT) *

	OFFICE CHARGES (1)	(2) PROF	HOSPITAL CHARGES (3)	(4) PROF	DIFFERENTIALS (1) - (3)	(1) - (4)
SPECIALTY	GLOBAL	COMP	GLOBAL	COMP		
CLINIC, GROUP PRACTICE EX	2.5996 (0.0859)	1.1757 (0.0447)	1.5175 (0.1439)	0.8848 (0.0718)	2.2022 (0.1502)	2.2577 (0.1096)
PODIATRY - SURGICAL CHIRO	1.7979 (0.0588)	0.3125 (0.0173)	1.2274 (0.0709)	1.3273 (0.1187)	1.3417 (0.1946)	1.6677 (0.0937)
RADIOLOGY	2.3528 (0.0780)	0.9923 (0.0688)	1.0817 (0.0922)	0.6405 (0.0499)	2.9478 (0.2014)	2.0518 (0.1200)
ORTHOPEDIC SURGERY	1.7755 (0.0600)	1.1121 (0.0673)	1.8914 (0.1455)	1.0081 (0.0735)	1.9819 (0.1383)	0.8814 (0.0476)
TOTAL	1.8610 (0.0614)	0.8562 (0.0510)	1.1202 (0.0960)	0.6525 (0.0510)	1.8652 (0.1873)	1.7304 (0.0980)
NATIONAL MEAN	$29.88	$17.12	$11.87	$12.51	$13.48	$17.87

* HCPCS CODES: 73620, 73630

NOTE: THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION WITHIN CARRIERS ARE NATIONAL WEIGHTED AVERAGES. SD AND CV FOR THE DEVIATION OF THE PRICING LOCALITY MEAN FROM THE MEAN OF THE CARRIER IN WHICH IT IS LOCATED, WERE WEIGHED BY THE CARRIER RELATIVE VOLUME.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-5

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION
OF MEAN CHARGES AND MEAN DIFFERENTIALS across pricing localities
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: OPTHAL BIOMETRY BY ULTRA-BIL *

	OFFICE CHARGES (1)	(2)	HOSPITAL CHARGES (3)	(4)	DIFFERENTIALS (1) - (3)	(1) - (4)
SPECIALTY	GLOBAL	PROF COMP	GLOBAL	PROF COMP		
CLINIC, GROUP PRACTICE EX	14.2392 (0.1085)	0.0000 (0.0000)	21.7020 (0.2621)	10.4967 (0.0850)	20.5098 (0.7504)	8.1020 (0.7476)
RADIOLOGY	1.5704 (0.0134)	. .	6.9777 (0.1512)	1.8801 (0.0395)	0.0000 (0.0000)	1.0974 (0.0178)
OPTHAMOLOGY	9.8037 (0.0755)	5.4378 (0.0575)	10.9186 (0.1380)	7.9063 (0.0954)	17.0085 (0.0495)	10.2574 (0.5119)
OPTHAMOLOGY, OTOL, RHINO	3.3591 (0.0227)	. .	2.8118 (0.0284)	. .	2.8510 (0.3327)	2.0090 (Z)
TOTAL	9.8154 (0.0755)	5.3433 (0.0565)	10.8224 (0.1384)	6.8204 (0.0849)	16.9497 (0.0597)	10.1894 (0.5112)
NATIONAL MEAN	$132.90	$78.40	$80.15	$68.14	$37.63	$59.61

* HCPCS CODES: 76516

NOTES: (1) THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION WITHIN CARRIERS ARE NATIONAL WEIGHTED AVERAGES. SD AND CV FOR THE DEVIATION OF THE PRICING LOCALITY MEAN FROM THE MEAN OF THE CARRIER IN WHICH IT IS LOCATED, WERE WEIGHED BY THE CARRIER RELATIVE VOLUME.

(2) WE SUBSTITUTED Z FOR NEGATIVE VALUES WHICH OCCUR WHEN THE DERIVED TECHNICAL DIFFERENTIAL IS NEGATIVE.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-5

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION OF MEAN CHARGES AND MEAN DIFFERENTIALS across pricing localities BY PHYSICIAN SPECIALTY AND LOCATION (COEF OF VAR IN PARENTHESIS) TEST: CAT SCAN OF HEAD *

	OFFICE CHARGES		HOSPITAL CHARGES		DIFFERENTIALS	
	(1)	(2)	(3)	(4)	(1) - (3)	(1) - (4)
SPECIALTY	GLOBAL	PROF COMP	GLOBAL	PROF COMP		
CLINIC, GROUP PRACTICE EX	33.7998 (0.1178)	6.4394 (0.0469)	8.5233 (0.1404)	6.4584 (0.0662)	73.6554 (0.4187)	45.9909 (0.2768)
RADIOLOGY	26.3770 (0.1017)	5.6726 (0.0614)	9.9952 (0.1346)	4.8578 (0.0535)	51.9466 (0.4152)	32.8419 (0.2619)
NEUROLOGICAL SURGERY	17.6738 (0.0786)	2.2768 (0.0261)	9.5426 (0.1121)	3.6493 (0.0394)	19.0495 (0.0974)	11.2476 (0.0872)
NEUROLOGY	11.4087 (0.0415)	2.7127 (0.0372)	11.7987 (0.0929)	2.6788 (0.0345)	58.6069 (2.5885)	9.3770 (0.0979)
TOTAL	25.2402 (0.0961)	5.2768 (0.0549)	9.8767 (0.1347)	4.8487 (0.0534)	53.8933 (0.4570)	32.5159 (0.2574)
NATIONAL MEAN	$289.34	$96.41	$85.79	$92.79	$162.84	$181.96

* HCPCS CODES: 70450, 70460, 70470

NOTE: THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION WITHIN CARRIERS ARE NATIONAL WEIGHTED AVERAGES. SD AND CV FOR THE DEVIATION OF THE PRICING LOCALITY MEAN FROM THE MEAN OF THE CARRIER IN WHICH IT IS LOCATED, WERE WEIGHED BY THE CARRIER RELATIVE VOLUME.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-5

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION
OF MEAN CHARGES AND MEAN DIFFERENTIALS across pricing localities
BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: ECHOGRAPHY *

	OFFICE CHARGES		HOSPITAL CHARGES		DIFFERENTIALS	
	(1)	(2)	(3)	(4)		
SPECIALTY	GLOBAL	PROF COMP	GLOBAL	PROF COMP	(1) - (3)	(1) - (4)
CLINIC, GROUP PRACTICE EX	10.6640 (0.0901)	4.0620 (0.0784)	4.6983 (0.0932)	3.6973 (0.0762)	14.1595 (0.2006)	8.4668 (0.1449)
ROENTGEN, RADIO (OSTEO)	4.0913 (0.0293)	. .	4.7836 (0.0842)	2.2605 (0.0494)	0.1182 (Z)	3.6815 (0.0447)
RADIOLOGY	10.2100 (0.0833)	6.3120 (0.1222)	3.9398 (0.0850)	2.8675 (0.0567)	11.0104 (0.2678)	8.4766 (0.1442)
INTERNAL MEDICINE	11.5947 (0.1046)	5.0441 (0.0746)	2.6859 (0.0435)	2.1317 (0.1012)	8.3495 (0.2419)	6.3860 (0.1086)
TOTAL	10.3636 (0.0861)	5.9642 (0.1145)	4.0029 (0.0855)	2.8803 (0.0574)	11.0404 (0.2582)	8.4220 (0.1433)
NATIONAL MEAN	$119.36	$53.98	$46.55	$48.64	$54.06	$58.72

* HCPCS CODES: 76700, 76705

NOTES: (1) THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION WITHIN CARRIERS ARE NATIONAL WEIGHTED AVERAGES. SD AND CV FOR THE DEVIATION OF THE PRICING LOCALITY MEAN FROM THE MEAN OF THE CARRIER IN WHICH IT IS LOCATED, WERE WEIGHED BY THE CARRIER RELATIVE VOLUME.

(2) WE SUBSTITUTED Z FOR NEGATIVE VALUES WHICH OCCUR WHEN THE DERIVED TECHNICAL DIFFERENTIAL IS NEGATIVE.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

TABLE 2-5

DIAGNOSTIC TEST STANDARD DEVIATION, COEFFICIENT OF VARIATION, OF MEAN CHARGES AND MEAN DIFFERENTIALS **across pricing localities** BY PHYSICIAN SPECIALTY AND LOCATION
(COEF OF VAR IN PARENTHESIS)
TEST: UPPER GI X-RAY *

SPECIALTY	OFFICE CHARGES (1) GLOBAL	(2) PROF COMP	HOSPITAL CHARGES (3) GLOBAL	(4) PROF COMP	DIFFERENTIALS (1) - (3)	(1) - (4)
CLINIC, GROUP PRACTICE EX	5.6313 (0.0669)	2.4954 (0.0510)	1.6295 (0.0723)	2.2087 (0.0652)	5.1465 (Z)	5.3222 (0.0954)
RADIOLOGY	4.9747 (0.0560)	5.8035 (0.1104)	3.2050 (0.0966)	1.6276 (0.0466)	9.0051 (0.2390)	5.3763 (0.1421)
INTERNAL MEDICINE	5.4806 (0.0693)	1.9459 (0.0467)	6.6535 (0.2607)	2.5545 (0.1441)	7.8249 (0.2855)	5.2844 (0.0987)
GENERAL PRACTICE	6.1058 (0.0910)	2.4514 (0.0504)	6.4126 (0.5458)	0.7868 (0.0243)	9.1472 (0.2260)	3.1509 (0.0904)
TOTAL	5.1304 (0.0596)	5.3223 (0.1018)	3.1023 (0.0976)	1.6431 (0.0476)	8.6224 (Z)	5.3580 (0.1387)
NATIONAL MEAN	$88.06	$41.65	$33.38	$33.71	$45.51	$48.73

* HCPCS CODES: 74240, 74241, 74245

NOTES: (1) THE STANDARD DEVIATIONS AND COEFFICIENT OF VARIATION WITHIN CARRIERS ARE NATIONAL WEIGHTED AVERAGES. SD AND CV FOR THE DEVIATION OF THE PRICING LOCALITY MEAN FROM THE MEAN OF THE CARRIER IN WHICH IT IS LOCATED, WERE WEIGHED BY THE CARRIER RELATIVE VOLUME.

(2) WE SUBSTITUTED Z FOR NEGATIVE VALUES WHICH OCCUR WHEN THE DERIVED TECHNICAL DIFFERENTIAL IS NEGATIVE.

SOURCE: 1986 BMAD PROCEDURE FILE, HEALTH CARE FINANCING ADMINISTRATION

Appendix A.1

IPA Fees

Page

1. Table 3-1: IPA Global and Professional Fees, by HCPCS Codes.....A.1-2

2. Table 3-2: IPA Global Fees, by HCPCS Codes.....A.1-3

Table 3-1
IPA GLOBAL AND PROFESSIONAL FEES, BY HCPCS CODES

	IPA #1		IPA #2		IPA #3		IPA #4		IPA #5	
TESTS	Prof	Global	Prof	Global	Prof	Tech	Prof	Global	Prof	Global
CT SCAN										
70450, 70460, 70470	$150.00	$300.00			$107.12	$319.52	$130.00	$403.00	$132.00	$434.38
X-RAYS										
71010, 71015	$ 14.00	$ 27.00			$ 14.32	$ 30.48	$ 16.00	$ 30.00	$ 12.51	$ 34.03
71020, 71021, 71022,										
71030, 71034, 71035	$ 15.00	$ 32.00			$ 14.40	$ 36.48	$ 20.00	$ 42.00	$ 18.22	$ 31.70
72170, 72180, 72190	$ 18.00	$ 36.00			$ 15.92	$ 36.88		$ 35.00	$ 18.22	$ 49.92
73020, 73030	$ 15.00	$ 30.00			$ 19.92	$ 34.32	$ 13.00	$ 32.00	$ 12.51	$ 34.03
73500, 73510, 73520	$ 18.00	$ 38.00			$ 18.96	$ 45.92	$ 18.00	$ 42.00	$ 18.22	$ 64.62
73560, 73562, 73564	$ 15.00	$ 29.00			$ 14.32	$ 32.80	$ 15.00	$ 34.00	$ 18.27	$ 49.92
73620, 73630	$ 15.00	$ 29.00			$ 14.32	$ 32.80	$ 13.00	$ 29.00	$ 14.37	$ 47.31
UPPER GI										
74240, 74241, 74245	$ 35.00	$ 71.00			$ 35.78	$ 81.84	$ 44.00	$ 97.00	$ 63.46	$168.08
OPHTH										
76516	$ 68.00	$140.00		$ 88.21	$ 40.08	$ 65.36	$ 63.00	$135.00	$ 27.38	$ 56.76
ABD ECHO										
76700	$ 48.00	$ 98.00	$ 32.45	$ 76.44	$ 80.00	$138.56	$ 66.00	$135.00.	$ 83.18	$166.89
76705	$ 33.00	$ 66.00	$ 17.70	$ 41.16	$ 59.76	$ 78.32	$ 42.00	$ 85.00		
EKG/HOLT/										
REAL TIME										
93000		$ 36.00			$ 20.00	$ 34.64		$ 28.00		$ 36.22
93262					$ 95.28					
93266					$ 40.00					$109.12
PER VAS										
93850, 93860, 93890,										
93910, 93950, 93960										
SPIRO										
94010, 94060, 94070								$ 36.00		

Table 3-2
IPA GLOBAL FEES, BY HCPCS CODES

TESTS	IPA #6 Global	IPA #7 Global	IPA #8 Global	IPA #9 Global	IPA #10 Global	IPA #11 Global	IPA #12 Global	IPA #13 Global	IPA #14 Global	IPA #15 Global	IPA #16 Global
CT SCAN											
70450, 70460, 70470	$303.98	$400.00		$540.00	$451.26	$379.90	$173.00		$440.00	$323.00	$375.00
X-RAYS											
71010, 71015	$ 60.00	$ 30.50		$ 42.00	$ 34.94	$ 26.66	$ 17.00		$ 36.50	$ 25.00	$ 30.00
71020, 71021, 71022,											
71030, 71034, 71035		$ 42.00		$ 52.00	$ 51.24	$ 39.99	$ 22.00		$ 50.50	$ 38.00	$ 45.00
72170, 72180, 72190	$ 60.00	$ 38.75		$ 47.00	$ 51.24	$ 39.99	$ 14.00		$ 48.00	$ 33.00	$ 30.00
73020, 73030	$ 55.50	$ 33.75		$ 46.00	$ 34.94	$ 39.99			$ 41.25	$ 40.00	$ 23.76
73500, 73510, 73520		$ 65.00		$ 57.00	$ 66.35	$ 39.99	$ 21.00		$ 64.00	$ 36.00	$ 27.28
73560, 73562, 73564		$ 33.75		$ 50.00	$ 34.94	$ 26.66			$ 44.75	$ 31.00	$ 30.00
73620, 73630	$ 39.00	$ 30.50		$ 50.00	$ 34.94	$ 26.66	$ 17.00		$ 43.25	$ 30.00	$ 30.00
UPPER GI											
74240, 74241, 74245		$135.00		$130.00	#131.26	$ 99.97	$ 53.00		$106.50	$197.00	$ 90.00
OPHTH											
76516	$180.00	$188.00		$208.00	$130.88	$107.97			$138.25	$250.00	$184.80
ABO ECHO											
76700	$174.99	$ 163.00		$188.00	$143.13	$145.29	$ 94.00		$175.00	$237.00	$130.00
76705		$ 88.00		$146.00	$115.17	$ 97.30	$ 79.00		$118.00	$ 95.00	$110.00
EKG/HOLT											
REAL TIME											
93000	$ 42.90	$ 36.00	$ 42.00	$ 37.00	$ 35.00	$ 45.32	$ 55.00	$ 43.00	$ 41.25	$ 35.00	$ 35.00
93262	$240.00	$246.00	$160.00		$133.02	$205.28				$183.00	$170.00
93266	$225.00	$179.00	$160.00							$ 75.00	$170.00
PER VAS											
93850, 93860, 93890,											
93810, 94060, 94070		$136.00	$107.00	$250.00	$103.76	$179.95		$ 40.00	$199.75	$130.00	$110.00
SPIRO											
94010, 94060, 94070	$ 44.99	$ 43.10	$ 64.00	$ 52.00	$ 61.42	$ 11.99			$ 52.00	$ 37.00	$100.00

Appendix B

Incremental Cash Flow Analyses

1. Spirometry....B-2
2. Ophthalmic Biometry....B-23
3. Abdominal Echography....B-38
4. Electrocardiogram....B-59
5. Non-Invasive Peripheral Vascular Testing....B-86
6. Chest X-ray, One View....B-107
7. Chest X-ray, Two Views....B-130
8. Pelvis X-ray....B-153
9. Hip X-ray....B-176
10. Shoulder X-ray....B-199
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14. C.T. Scan....B-261
15. Holter-Tape Recording....B-276
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19. Real Time Analysis....B-369

Note: For each procedure we present two sets of analyses: one which assumes the volume of procedures per year and calculates the normal-return technical component price and one which calculates the normal-return volume for the BMAD technical differential.

1. SPIROMETRY

1. SPIROMETRY
   NORMAL-RETURN PRICES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Spirometry	Specialist?	N
CPT-4 Code(s):	94010	High-end/Low-end:	L

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	100	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.33
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	4.00
Annual Maintenance %:	2.50%	Supply Cost/Procedure:	$0.30
Equipment Purchase Price:	$4,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	90%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$15.59	Net Present Value:	($0)

	1 Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$1,559	$1,559	$1,559	$1,559	$1,559	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$4,000	$0	$0	$0	$0	($400)	$0	$0
3 x % utilization	$3,600	$0	$0	$0	$0	($360)	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$347	$347	$347	$347	$347	$0	$0
6 supplies	$0	$30	$30	$30	$30	$30	$0	$0
7 maintenance	$0	$90	$90	$90	$90	$90	$0	$0
8 overhead	$0	$49	$49	$49	$49	$49	$0	$0
9 Total Expenses/Yr.	$3,600	$516	$516	$516	$516	$156	$0	$0
10 Taxes Before Depreciation	$0	$360	$360	$360	$360	$484	$0	$0
11 Depreciation Tax Shield	$0	($248)	($248)	($248)	($248)	($124)	$0	$0
12 Net Cash Outflow/Yr.	$3,600	$628	$628	$628	$628	$516	$0	$0
13 NET CASH FLOW	($3,600)	$931	$931	$931	$931	$1,043	$0	$0
14 DISCOUNTED CASH FLOW	($3,600)	$847	$770	$700	$636	$648	$0	$0
15 PV of Interest Tax Shield	$0.00	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$0.30
X		
RESOURCE UNITS/PROCEDURE	0.33	1.00
X		
PROCEDURES/YEAR	100	100
= ANNUAL COST	$347	$30

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$100.00
X		
RESOURCE UNITS/YEAR	4.0	1.0
X		
PERCENTAGE UTILIZATION	90%	90%
= ANNUAL COST	$49	$90

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Spirometry

NON-SPECIALIST, LOW COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$15.59	100	10.00%	0.00%	90.00%	$4,000	$974	5
HIGH ANN. PROCEDURES	$13.23	125	10.00%	0.00%	90.00%	$4,000	$974	5
LOW ANN. PROCEDURES	$19.53	75	10.00%	0.00%	90.00%	$4,000	$974	5
HIGH COST OF CAPITAL	$16.54	100	12.50%	0.00%	90.00%	$4,000	$974	5
LOW COST OF CAPITAL	$14.67	100	7.50%	0.00%	90.00%	$4,000	$974	5
LOW % UTILIZATION	$12.64	100	10.00%	0.00%	67.50%	$4,000	$974	5
HIGH % UTILIZATION	$16.90	100	10.00%	0.00%	100.00%	$4,000	$974	5
HIGH % CAP. BORROWED	$14.63	100	10.00%	25.00%	90.00%	$4,000	$974	5
HIGH EQUIP. PRICE	$18.42	100	10.00%	0.00%	90.00%	$5,000	$974	5
LOW EQUIP. PRICE	$12.76	100	10.00%	0.00%	90.00%	$3,000	$974	5
HIGH OP. EXPENSES	$16.88	100	10.00%	0.00%	90.00%	$4,000	$1,217	5
LOW OP. EXPENSES	$14.30	100	10.00%	0.00%	90.00%	$4,000	$730	5
LONG USEFUL LIFE	$14.48	100	10.00%	0.00%	90.00%	$4,000	$730	6
SHORT USEFUL LIFE	$15.87	100	10.00%	0.00%	90.00%	$4,000	$730	4

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Spirometry	Specialist?	N
CPT-4 Code(s):	94010	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	100	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.33
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	20.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$2.00
Equipment Purchase Price:	$4,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	90%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$20.17	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$2,017	$2,017	$2,017	$2,017	$2,017	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$4,000	$0	$0	$0	$0	($400)	$0	$0
3 x % utilization	$3,600	$0	$0	$0	$0	($360)	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$347	$347	$347	$347	$347	$0	$0
6 supplies	$0	$200	$200	$200	$200	$200	$0	$0
7 maintenance	$0	$180	$180	$180	$180	$180	$0	$0
8 overhead	$0	$247	$247	$247	$247	$247	$0	$0
9 Total Expenses/Yr.	$3,600	$974	$974	$974	$974	$614	$0	$0
10 Taxes Before Depreciation	$0	$360	$360	$360	$360	$484	$0	$0
11 Depreciation Tax Shield	$0	($248)	($248)	($248)	($248)	($124)	$0	$0
12 Net Cash Outflow/Yr.	$3,600	$1,085	$1,085	$1,085	$1,085	$974	$0	$0
13 NET CASH FLOW	($3,600)	$932	$932	$932	$932	$1,043	$0	$0
14 DISCOUNTED CASH FLOW	($3,600)	$847	$770	$700	$636	$648	$0	$0
15 PV of Interest Tax Shield	$0.00	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$2.00
X		
RESOURCE UNITS/PROCEDURE	0.33	1.00
X		
PROCEDURES/YEAR	100	100
= ANNUAL COST	$347	$200

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$200.00
X		
RESOURCE UNITS/YEAR	20.0	1.0
X		
PERCENTAGE UTILIZATION	90%	90%
= ANNUAL COST	$247	$180

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Spirometry	Specialist?	S
CPT-4 Code(s):	94010	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	1000	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.33
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	4.00
Annual Maintenance %:	2.50%	Supply Cost/Procedure:	$0.30
Equipment Purchase Price:	$8,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	30%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$4.54	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$4,543	$4,543	$4,543	$4,543	$4,543	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$8,000	$0	$0	$0	$0	($800)	$0	$0
3 x % utilization	$2,400	$0	$0	$0	$0	($240)	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$3,472	$3,472	$3,472	$3,472	$3,472	$0	$0
6 supplies	$0	$300	$300	$300	$300	$300	$0	$0
7 maintenance	$0	$60	$60	$60	$60	$60	$0	$0
8 overhead	$0	$16	$16	$16	$16	$16	$0	$0
9 Total Expenses/Yr.	$2,400	$3,848	$3,848	$3,848	$3,848	$3,608	$0	$0
10 Taxes Before Depreciation	$0	$240	$240	$240	$240	$323	$0	$0
11 Depreciation Tax Shield	$0	($166)	($166)	($166)	($166)	($83)	$0	$0
12 Net Cash Outflow/Yr.	$2,400	$3,922	$3,922	$3,922	$3,922	$3,848	$0	$0
13 NET CASH FLOW	($2,400)	$621	$621	$621	$621	$695	$0	$0
14 DISCOUNTED CASH FLOW	($2,400)	$564	$513	$466	$424	$432	$0	$0

15 PV of Interest Tax Shield $0.00 [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$0.30
X		
RESOURCE UNITS/PROCEDURE	0.33	1.00
X		
PROCEDURES/YEAR	1000	1000
= ANNUAL COST	$3,472	$300

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$200.00
X		
RESOURCE UNITS/YEAR	4.0	1.0
X		
PERCENTAGE UTILIZATION	30%	30%
= ANNUAL COST	$16	$60

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Spirometry	Specialist?	S
CPT-4 Code(s):	94010	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	500	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.33
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	20.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$2.00
Equipment Purchase Price:	$8,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	30%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$7.27	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$3,633	$3,633	$3,633	$3,633	$3,633	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$8,000	$0	$0	$0	$0	($800)	$0	$0
3 x % utilization	$2,400	$0	$0	$0	$0	($240)	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$1,736	$1,736	$1,736	$1,736	$1,736	$0	$0
6 supplies	$0	$1,000	$1,000	$1,000	$1,000	$1,000	$0	$0
7 maintenance	$0	$120	$120	$120	$120	$120	$0	$0
8 overhead	$0	$82	$82	$82	$82	$82	$0	$0
9 Total Expenses/Yr.	$2,400	$2,938	$2,938	$2,938	$2,938	$2,698	$0	$0
10 Taxes Before Depreciation	$0	$240	$240	$240	$240	$323	$0	$0
11 Depreciation Tax Shield	$0	($166)	($166)	($166)	($166)	($83)	$0	$0
12 Net Cash Outflow/Yr.	$2,400	$3,012	$3,012	$3,012	$3,012	$2,938	$0	$0
13 NET CASH FLOW	($2,400)	$621	$621	$621	$621	$695	$0	$0
14 DISCOUNTED CASH FLOW	($2,400)	$564	$513	$466	$424	$432	$0	$0

15 PV of Interest Tax Shield $0.00 [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$2.00
X		
RESOURCE UNITS/PROCEDURE	0.33	1.00
X		
PROCEDURES/YEAR	500	500
= ANNUAL COST	$1,736	$1,000

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$400.00
X		
RESOURCE UNITS/YEAR	20.0	1.0
X		
PERCENTAGE UTILIZATION	30%	30%
= ANNUAL COST	$82	$120

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Spirometry

SPECIALIST, HIGH COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$7.27	500	10.00%	0.00%	30.00%	$8,000	$2,938	5
HIGH ANN. PROCEDURES	$6.91	625	10.00%	0.00%	30.00%	$8,000	$2,938	5
LOW ANN. PROCEDURES	$7.86	375	10.00%	0.00%	30.00%	$8,000	$2,938	5
HIGH COST OF CAPITAL	$7.39	500	12.50%	0.00%	30.00%	$8,000	$2,938	5
LOW COST OF CAPITAL	$7.14	500	7.50%	0.00%	30.00%	$8,000	$2,938	5
LOW % UTILIZATION	$6.82	500	10.00%	0.00%	22.50%	$8,000	$2,938	5
HIGH % UTILIZATION	$7.71	500	10.00%	0.00%	37.50%	$8,000	$2,938	5
HIGH % CAP. BORROWED	$7.11	500	10.00%	25.00%	30.00%	$8,000	$2,938	5
HIGH EQUIP. PRICE	$7.67	500	10.00%	0.00%	30.00%	$10,000	$2,938	5
LOW EQUIP. PRICE	$6.86	500	10.00%	0.00%	30.00%	$6,000	$2,938	5
HIGH OP. EXPENSES	$8.74	500	10.00%	0.00%	30.00%	$8,000	$3,673	5
LOW OP. EXPENSES	$5.80	500	10.00%	0.00%	30.00%	$8,000	$2,204	5
LONG USEFUL LIFE	$7.12	500	10.00%	0.00%	30.00%	$8,000	$2,204	8
SHORT USEFUL LIFE	$7.50	500	10.00%	0.00%	30.00%	$8,000	$2,204	4

1. SPIROMETRY
NORMAL-RETURN VOLUMES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Spirometry	Specialist?	N
CPT-4 Code(s):	94010	High-end/Low-end:	L

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	52.8	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.33
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	4.00
Annual Maintenance %:	2.50%	Supply Cost/Procedure:	$0.30
Equipment Purchase Price:	$4,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	90%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$26.14	Net Present Value:	($0)

1

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$1,381	$1,381	$1,381	$1,381	$1,381	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$4,000	$0	$0	$0	$0	($400)	$0	$0
3 x % utilization	$3,600	$0	$0	$0	$0	($360)	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$183	$183	$183	$183	$183	$0	$0
6 supplies	$0	$16	$16	$16	$16	$16	$0	$0
7 maintenance	$0	$90	$90	$90	$90	$90	$0	$0
8 overhead	$0	$49	$49	$49	$49	$49	$0	$0
9 Total Expenses/Yr.	$3,600	$339	$339	$339	$339	($21)	$0	$0
10 Taxes Before Depreciation	$0	$360	$360	$360	$360	$484	$0	$0
11 Depreciation Tax Shield	$0	($248)	($248)	($248)	($248)	($124)	$0	$0
12 Net Cash Outflow/Yr.	$3,600	$450	$450	$450	$450	$338	$0	$0
13 NET CASH FLOW	($3,600)	$931	$931	$931	$931	$1,043	$0	$0
14 DISCOUNTED CASH FLOW	($3,600)	$847	$770	$700	$636	$648	$0	$0

15 PV of Interest Tax Shield $0.00 [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$0.30
X		
RESOURCE UNITS/PROCEDURE	0.33	1.00
X		
PROCEDURES/YEAR	52.83833	52.83833
= ANNUAL COST	$183	$16

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$100.00
X		
RESOURCE UNITS/YEAR	4.0	1.0
X		
PERCENTAGE UTILIZATION	90%	90%
= ANNUAL COST	$49	$90

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Spirometry

NON_SPECIALIST, LOW-COST

	BMAD TECH	BREAK EVEN PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$26.14	52.9	10.00%	0.00%	90.00%	$4,000	$762	5
HIGH ANN. PROCEDURES	$26.14	52.8	10.00%	0.00%	90.00%	$4,000	$762	5
LOW ANN. PROCEDURES	$26.14	52.8	10.00%	0.00%	90.00%	$4,000	$762	5
HIGH COST OF CAPITAL	$26.14	57.1	12.50%	0.00%	90.00%	$4,000	$762	5
LOW COST OF CAPITAL	$26.14	48.7	7.50%	0.00%	90.00%	$4,000	$762	5
LOW % UTILIZATION	$26.14	39.6	10.00%	0.00%	67.50%	$4,000	$762	5
HIGH % UTILIZATION	$26.14	58.7	10.00%	0.00%	100.00%	$4,000	$762	5
HIGH % CAP. BORROWED	$26.14	48.6	10.00%	25.00%	90.00%	$4,000	$762	5
HIGH EQUIP. PRICE	$26.14	65.5	10.00%	0.00%	90.00%	$5,000	$762	5
LOW EQUIP. PRICE	$26.14	40.2	10.00%	0.00%	90.00%	$3,000	$762	5
HIGH OP. EXPENSES	$26.14	56.8	10.00%	0.00%	90.00%	$4,000	$952	5
LOW OP. EXPENSES	$26.14	49.2	10.00%	0.00%	90.00%	$4,000	$571	5
LONG USEFUL LIFE	$26.14	44.5	10.00%	0.00%	90.00%	$4,000	$571	5
SHORT USEFUL LIFE	$26.14	50.4	10.00%	0.00%	90.00%	$4,000	$571	4

Diagnostic Technology:	Spirometry	Specialist?	N
CPT-4 Code(s):	94010	High-end/Low-end:	H

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	165.0	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.33
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	20.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$2.00
Equipment Purchase Price:	$4,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	90%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$26.14	Net Present Value:	$4,821

1

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$4,314	$4,314	$4,314	$4,314	$4,314	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$4,000	$0	$0	$0	$0	($400)	$0	$0
3 x % utilization	$3,600	$0	$0	$0	$0	($360)	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$573	$573	$573	$573	$573	$0	$0
6 supplies	$0	$330	$330	$330	$330	$330	$0	$0
7 maintenance	$0	$180	$180	$180	$180	$180	$0	$0
8 overhead	$0	$247	$247	$247	$247	$247	$0	$0
9 Total Expenses/Yr.	$3,600	$1,330	$1,330	$1,330	$1,330	$970	$0	$0
10 Taxes Before Depreciation	$0	$1,030	$1,030	$1,030	$1,030	$1,154	$0	$0
11 Depreciation Tax Shield	$0	($248)	($248)	($248)	($248)	($124)	$0	$0
12 Net Cash Outflow/Yr.	$3,600	$2,111	$2,111	$2,111	$2,111	$1,999	$0	$0
13 NET CASH FLOW	($3,600)	$2,203	$2,203	$2,203	$2,203	$2,315	$0	$0
14 DISCOUNTED CASH FLOW	($3,600)	$2,003	$1,821	$1,655	$1,505	$1,437	$0	$0
15 PV of Interest Tax Shield	$0.00	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	$4,821							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Spirometry	Specialist?	S
CPT-4 Code(s):	94010	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	34	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.33
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	4.00
Annual Maintenance %:	2.50%	Supply Cost/Procedure:	$0.30
Equipment Purchase Price:	$8,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	30%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$26.14	Net Present Value:	($0)

	1 Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$902	$902	$902	$902	$902	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$8,000	$0	$0	$0	$0	($800)	$0	$0
3 x % utilization	$2,400	$0	$0	$0	$0	($240)	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$120	$120	$120	$120	$120	$0	$0
6 supplies	$0	$10	$10	$10	$10	$10	$0	$0
7 maintenance	$0	$60	$60	$60	$60	$60	$0	$0
8 overhead	$0	$16	$16	$16	$16	$16	$0	$0
9 Total Expenses/Yr.	$2,400	$207	$207	$207	$207	($33)	$0	$0
10 Taxes Before Depreciation	$0	$240	$240	$240	$240	$323	$0	$0
11 Depreciation Tax Shield	$0	($166)	($166)	($166)	($166)	($83)	$0	$0
12 Net Cash Outflow/Yr.	$2,400	$281	$281	$281	$281	$206	$0	$0
13 NET CASH FLOW	($2,400)	$621	$621	$621	$621	$695	$0	$0
14 DISCOUNTED CASH FLOW	($2,400)	$564	$513	$466	$424	$432	$0	$0
15 PV of Interest Tax Shield	$0.00	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Spirometry	Specialist?	S
CPT-4 Code(s):	94010	High-end/Low-end:	H

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	43.4	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.33
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	20.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$2.00
Equipment Purchase Price:	$8,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	30%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$26.14	Net Present Value:	($0)

	1 Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$1,135	$1,135	$1,135	$1,135	$1,135	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$8,000	$0	$0	$0	$0	($800)	$0	$0
3 x % utilization	$2,400	$0	$0	$0	$0	($240)	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$151	$151	$151	$151	$151	$0	$0
6 supplies	$0	$87	$87	$87	$87	$87	$0	$0
7 maintenance	$0	$120	$120	$120	$120	$120	$0	$0
8 overhead	$0	$82	$82	$82	$82	$82	$0	$0
9 Total Expenses/Yr.	$2,400	$440	$440	$440	$440	$200	$0	$0
10 Taxes Before Depreciation	$0	$240	$240	$240	$240	$323	$0	$0
11 Depreciation Tax Shield	$0	($166)	($166)	($166)	($166)	($83)	$0	$0
12 Net Cash Outflow/Yr.	$2,400	$514	$514	$514	$514	$439	$0	$0
13 NET CASH FLOW	($2,400)	$621	$621	$621	$621	$695	$0	$0
14 DISCOUNTED CASH FLOW	($2,400)	$564	$513	$466	$424	$432	$0	$0

15 PV of Interest Tax Shield $0.00 [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$2.00
X		
RESOURCE UNITS/PROCEDURE	0.33	1.00
X		
PROCEDURES/YEAR	43.40802	43.40802
= ANNUAL COST	$151	$87

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$400.00
X		
RESOURCE UNITS/YEAR	20.0	1.0
X		
PERCENTAGE UTILIZATION	30%	30%
= ANNUAL COST	$82	$120

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Spirometry

SPECIALIST, HIGH COST

	BMAD TECH	BREAK EVEN PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$26.14	43.4	10.00%	0.00%	30.00%	$8,000	$1,105	5
HIGH ANN. PROCEDURES	$26.14	43.4	10.00%	0.00%	30.00%	$8,000	$1,105	5
LOW ANN. PROCEDURES	$26.14	43.4	10.00%	0.00%	30.00%	$8,000	$1,105	5
HIGH COST OF CAPITAL	$26.14	46.5	12.50%	0.00%	30.00%	$8,000	$1,105	5
LOW COST OF CAPITAL	$26.14	40.4	7.50%	0.00%	30.00%	$8,000	$1,105	5
LOW % UTILIZATION	$26.14	32.6	10.00%	0.00%	22.50%	$8,000	$1,105	5
HIGH % UTILIZATION	$26.14	54.3	10.00%	0.00%	37.50%	$8,000	$1,105	5
HIGH % CAP. BORROWED	$26.14	39.7	10.00%	25.00%	30.00%	$8,000	$1,105	5
HIGH EQUIP. PRICE	$26.14	53.3	10.00%	0.00%	30.00%	$10,000	$1,105	5
LOW EQUIP. PRICE	$26.14	33.6	10.00%	0.00%	30.00%	$6,000	$1,105	5
HIGH OP. EXPENSES	$26.14	49.1	10.00%	0.00%	30.00%	$8,000	$1,381	5
LOW OP. EXPENSES	$26.14	38.4	10.00%	0.00%	30.00%	$8,000	$829	5
LONG USEFUL LIFE	$26.14	35.1	10.00%	0.00%	30.00%	$8,000	$829	6
SHORT USEFUL LIFE	$26.14	39.3	10.00%	0.00%	30.00%	$8,000	$829	4

2. OPHTHALMIC BIOMETRY

2. OPHTHALMIC BIOMETRY
NORMAL-RETURN PRICES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Opth Biometry	Specialist?	S
CPT-4 Code(s):	76516	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	150	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.25
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	4.00
Annual Maintenance %:	3.50%	Supply Cost/Procedure:	$0.05
Equipment Purchase Price:	$6,250	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	90%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$16.56	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$2,484	$2,484	$2,484	$2,484	$2,484	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$6,250	$0	$0	$0	$0	($625)	$0	$0
3 x % utilization	$5,625	$0	$0	$0	$0	($563)	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$602	$602	$602	$602	$602	$0	$0
6 supplies	$0	$8	$8	$8	$8	$8	$0	$0
7 maintenance	$0	$197	$197	$197	$197	$197	$0	$0
8 overhead	$0	$49	$49	$49	$49	$49	$0	$0
9 Total Expenses/Yr.	$5,625	$855	$855	$855	$855	$293	$0	$0
10 Taxes Before Depreciation	$0	$562	$562	$562	$562	$756	$0	$0
11 Depreciation Tax Shield	$0	($388)	($388)	($388)	($388)	($194)	$0	$0
12 Net Cash Outflow/Yr.	$5,625	$1,029	$1,029	$1,029	$1,029	$855	$0	$0
13 NET CASH FLOW	($5,625)	$1,455	$1,455	$1,455	$1,455	$1,630	$0	$0
14 DISCOUNTED CASH FLOW	($5,625)	$1,323	$1,203	$1,093	$994	$1,012	$0	$0
15 PV of Interest Tax Shield	$0.00	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$0.05
X		
RESOURCE UNITS/PROCEDURE	0.25	1.00
X		
PROCEDURES/YEAR	150	150
= ANNUAL COST	$602	$8

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$218.75
X		
RESOURCE UNITS/YEAR	4.0	1.0
X		
PERCENTAGE UTILIZATION	90%	90%
= ANNUAL COST	$49	$197

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Opth Biometry

SPECIALIST, LOW COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$16.56	150	10.00%	0.00%	90.00%	$6,250	$855	5
HIGH ANN. PROCEDURES	$14.06	187.5	10.00%	0.00%	90.00%	$6,250	$855	5
LOW ANN. PROCEDURES	$20.73	112.5	10.00%	0.00%	90.00%	$6,250	$855	5
HIGH COST OF CAPITAL	$17.56	150	12.50%	0.00%	90.00%	$6,250	$855	5
LOW COST OF CAPITAL	$15.60	150	7.50%	0.00%	90.00%	$6,250	$855	5
LOW % UTILIZATION	$13.44	150	10.00%	0.00%	67.50%	$6,250	$855	5
HIGH % UTILIZATION	$17.95	150	10.00%	0.00%	100.00%	$6,250	$855	5
HIGH % CAP. BORROWED	$15.56	150	10.00%	25.00%	90.00%	$6,250	$855	5
HIGH EQUIP. PRICE	$19.61	150	10.00%	0.00%	90.00%	$7,813	$855	5
LOW EQUIP. PRICE	$13.52	150	10.00%	0.00%	90.00%	$4,688	$855	5
HIGH OP. EXPENSES	$17.99	150	10.00%	0.00%	90.00%	$6,250	$1,069	5
LOW OP. EXPENSES	$15.14	150	10.00%	0.00%	90.00%	$6,250	$641	5
LONG USEFUL LIFE	$13.98	150	10.00%	0.00%	90.00%	$6,250	$641	6
SHORT USEFUL LIFE	$15.43	150	10.00%	0.00%	90.00%	$6,250	$641	4

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Opth Biometry	Specialist?:	S
CPT-4 Code(s):	76516	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	150	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.25
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	36.00
Annual Maintenance %:	7.00%	Supply Cost/Procedure:	$0.10
Equipment Purchase Price:	$12,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	90%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$32.96	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$4,944	$4,944	$4,944	$4,944	$4,944	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$12,000	$0	$0	$0	$0	($1,200)	$0	$0
3 x % utilization	$10,800	$0	$0	$0	$0	($1,080)	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$602	$602	$602	$602	$602	$0	$0
6 supplies	$0	$15	$15	$15	$15	$15	$0	$0
7 maintenance	$0	$756	$756	$756	$756	$756	$0	$0
8 overhead	$0	$444	$444	$444	$444	$444	$0	$0
9 Total Expenses/Yr.	$10,800	$1,816	$1,816	$1,816	$1,816	$736	$0	$0
10 Taxes Before Depreciation	$0	$1,079	$1,079	$1,079	$1,079	$1,452	$0	$0
11 Depreciation Tax Shield	$0	($745)	($745)	($745)	($745)	($373)	$0	$0
12 Net Cash Outflow/Yr.	$10,800	$2,150	$2,150	$2,150	$2,150	$1,816	$0	$0
13 NET CASH FLOW	($10,800)	$2,794	$2,794	$2,794	$2,794	$3,129	$0	$0
14 DISCOUNTED CASH FLOW	($10,800)	$2,540	$2,309	$2,099	$1,908	$1,943	$0	$0
15 PV of Interest Tax Shield	$0.00	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$0.10
X		
RESOURCE UNITS/PROCEDURE	0.25	1.00
X		
PROCEDURES/YEAR	150	150
= ANNUAL COST	$602	$15

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$840.00
X		
RESOURCE UNITS/YEAR	36.0	1.0
X		
PERCENTAGE UTILIZATION	90%	90%
= ANNUAL COST	$444	$756

Present Value of Interest Tax Shield
(line I1 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Opth Biometry

SPECIALIST, HIGH COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$32.96	150	10.00%	0.00%	90.00%	$12,000	$1,816	5
HIGH ANN. PROCEDURES	$27.19	187.5	10.00%	0.00%	90.00%	$12,000	$1,816	5
LOW ANN. PROCEDURES	$42.58	112.5	10.00%	0.00%	90.00%	$12,000	$1,816	5
HIGH COST OF CAPITAL	$34.87	150	12.50%	0.00%	90.00%	$12,000	$1,816	5
LOW COST OF CAPITAL	$31.11	150	7.50%	0.00%	90.00%	$12,000	$1,816	5
LOW % UTILIZATION	$25.75	150	10.00%	0.00%	67.50%	$12,000	$1,816	5
HIGH % UTILIZATION	$36.17	150	10.00%	0.00%	100.00%	$12,000	$1,816	5
HIGH % CAP. BORROWED	$31.04	150	10.00%	25.00%	90.00%	$12,000	$1,816	5
HIGH EQUIP. PRICE	$39.44	150	10.00%	0.00%	90.00%	$15,000	$1,816	5
LOW EQUIP. PRICE	$26.49	150	10.00%	0.00%	90.00%	$9,000	$1,816	5
HIGH OP. EXPENSES	$35.99	150	10.00%	0.00%	90.00%	$12,000	$2,270	5
LOW OP. EXPENSES	$29.94	150	10.00%	0.00%	90.00%	$12,000	$1,362	5
LONG USEFUL LIFE	$27.72	150	10.00%	0.00%	90.00%	$12,000	$1,362	6
SHORT USEFUL LIFE	$30.49	150	10.00%	0.00%	90.00%	$12,000	$1,362	4

2. OPHTHALMIC BIOMETRY
NORMAL-RETURN VOLUMES

Note: The price used in the normal-return volumes analyses is the average BMAD technical differential updated to 1988 by the medical and component of the CPI. The BMAD updated price in summary tables E-2 and 5-2 is calculated according to a 1988 regulation which restricts the global fee for this procedure to 5% of ambulatory cataract surgery.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Opth. Biometry	Specialist?	S
CPT-4 Code(s):	76516	High-end/Low-end:	L

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	26.2	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.25
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	4.00
Annual Maintenance %:	3.50%	Supply Cost/Procedure:	$0.05
Equipment Purchase Price:	$6,250	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	90%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$75.62	Net Present Value:	($0)

1

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$1,982	$1,982	$1,982	$1,982	$1,982	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$6,250	$0	$0	$0	$0	($625)	$0	$0
3 x % utilization	$5,625	$0	$0	$0	$0	($563)	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$105	$105	$105	$105	$105	$0	$0
6 supplies	$0	$1	$1	$1	$1	$1	$0	$0
7 maintenance	$0	$197	$197	$197	$197	$197	$0	$0
8 overhead	$0	$49	$49	$49	$49	$49	$0	$0
9 Total Expenses/Yr.	$5,625	$353	$353	$353	$353	($210)	$0	$0
10 Taxes Before Depreciation	$0	$562	$562	$562	$562	$756	$0	$0
11 Depreciation Tax Shield	$0	($388)	($388)	($388)	($388)	($194)	$0	$0
12 Net Cash Outflow/Yr.	$5,625	$527	$527	$527	$527	$352	$0	$0
13 NET CASH FLOW	($5,625)	$1,455	$1,455	$1,455	$1,455	$1,630	$0	$0
14 DISCOUNTED CASH FLOW	($5,625)	$1,323	$1,203	$1,093	$994	$1,012	$0	$0

15 PV of Interest Tax Shield $0.00 [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$0.05
X		
RESOURCE UNITS/PROCEDURE	0.25	1.00
X		
PROCEDURES/YEAR	26.20747	26.20747
= ANNUAL COST	$105	$1

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$218.75
X		
RESOURCE UNITS/YEAR	4.0	1.0
X		
PERCENTAGE UTILIZATION	90%	90%
= ANNUAL COST	$49	$197

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Opth. Biometry

SPECIALIST, LOW COST

	BMAD TECH	BREAK EVEN PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$75.62	26.2	10.00%	0.00%	90.00%	$6,250	$916	5
HIGH ANN. PROCEDURES	$75.62	26.2	10.00%	0.00%	90.00%	$6,250	$916	5
LOW ANN. PROCEDURES	$75.62	26.2	10.00%	0.00%	90.00%	$6,250	$916	5
HIGH COST OF CAPITAL	$75.62	28.3	12.50%	0.00%	90.00%	$6,250	$916	5
LOW COST OF CAPITAL	$75.62	24.2	7.50%	0.00%	90.00%	$6,250	$916	5
LOW % UTILIZATION	$75.62	19.7	10.00%	0.00%	67.50%	$6,250	$916	5
HIGH % UTILIZATION	$75.62	29.1	10.00%	0.00%	100.00%	$6,250	$916	5
HIGH % CAP. BORROWED	$75.62	24.1	10.00%	25.00%	90.00%	$6,250	$916	5
HIGH EQUIP. PRICE	$75.62	32.6	10.00%	0.00%	90.00%	$7,813	$916	5
LOW EQUIP. PRICE	$75.62	19.8	10.00%	0.00%	90.00%	$4,688	$916	5
HIGH OP. EXPENSES	$75.62	27.5	10.00%	0.00%	90.00%	$6,250	$1,145	5
LOW OP. EXPENSES	$75.62	25.0	10.00%	0.00%	90.00%	$6,250	$687	5
LONG USEFUL LIFE	$75.62	22.6	10.00%	0.00%	90.00%	$6,250	$687	6
SHORT USEFUL LIFE	$75.62	25.6	10.00%	0.00%	90.00%	$6,250	$687	4

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Opth. Biometry	Specialist?	S
CPT-4 Code(s):	76516	High-end/Low-end:	H

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	60.5	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.25
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	36.00
Annual Maintenance %:	7.00%	Supply Cost/Procedure:	$0.10
Equipment Purchase Price:	$12,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	90%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$75.62	Net Present Value:	($0)

1

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$4,577	$4,577	$4,577	$4,577	$4,577	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$12,000	$0	$0	$0	$0	($1,200)	$0	$0
3 x % utilization	$10,800	$0	$0	$0	$0	($1,080)	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$243	$243	$243	$243	$243	$0	$0
6 supplies	$0	$6	$6	$6	$6	$6	$0	$0
7 maintenance	$0	$756	$756	$756	$756	$756	$0	$0
8 overhead	$0	$444	$444	$444	$444	$444	$0	$0
9 Total Expenses/Yr.	$10,800	$1,449	$1,449	$1,449	$1,449	$369	$0	$0
10 Taxes Before Depreciation	$0	$1,079	$1,079	$1,079	$1,079	$1,452	$0	$0
11 Depreciation Tax Shield	$0	($745)	($745)	($745)	($745)	($373)	$0	$0
12 Net Cash Outflow/Yr.	$10,800	$1,783	$1,783	$1,783	$1,783	$1,448	$0	$0
13 NET CASH FLOW	($10,800)	$2,794	$2,794	$2,794	$2,794	$3,129	$0	$0
14 DISCOUNTED CASH FLOW	($10,800)	$2,540	$2,309	$2,099	$1,908	$1,943	$0	$0

15 PV of Interest Tax Shield $0.00 [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$0.10
X		
RESOURCE UNITS/PROCEDURE	0.25	1.00
X		
PROCEDURES/YEAR	60.52356	60.52356
= ANNUAL COST	$243	$6

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$840.00
X		
RESOURCE UNITS/YEAR	36.0	1.0
X		
PERCENTAGE UTILIZATION	90%	90%
= ANNUAL COST	$444	$756

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Opth. Biometry

SPECIALIST, HIGH COST

	BMAD TECH	BREAK EVEN PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$75.62	60.5	10.00%	0.00%	90.00%	$12,000	$1,878	5
HIGH ANN. PROCEDURES	$75.62	60.5	10.00%	0.00%	90.00%	$12,000	$1,878	5
LOW ANN. PROCEDURES	$75.62	60.5	10.00%	0.00%	90.00%	$12,000	$1,878	5
HIGH COST OF CAPITAL	$75.62	64.5	12.50%	0.00%	90.00%	$12,000	$1,878	5
LOW COST OF CAPITAL	$75.62	56.6	7.50%	0.00%	90.00%	$12,000	$1,878	5
LOW % UTILIZATION	$75.62	45.4	10.00%	0.00%	67.50%	$12,000	$1,878	5
HIGH % UTILIZATION	$75.62	67.2	10.00%	0.00%	100.00%	$12,000	$1,878	5
HIGH % CAP. BORROWED	$75.62	56.5	10.00%	25.00%	90.00%	$12,000	$1,878	5
HIGH EQUIP. PRICE	$75.62	74.1	10.00%	0.00%	90.00%	$15,000	$1,878	5
LOW EQUIP. PRICE	$75.62	46.9	10.00%	0.00%	90.00%	$9,000	$1,878	5
HIGH OP. EXPENSES	$75.62	65.7	10.00%	0.00%	90.00%	$12,000	$2,348	5
LOW OP. EXPENSES	$75.62	55.5	10.00%	0.00%	90.00%	$12,000	$1,409	5
LONG USEFUL LIFE	$75.62	50.9	10.00%	0.00%	90.00%	$12,000	$1,409	6
SHORT USEFUL LIFE	$75.62	56.7	10.00%	0.00%	90.00%	$12,000	$1,409	4

3. ABDOMINAL ECHOGRAPHY

3. ABDOMINAL ECHOGRAPHY
NORMAL-RETURN PRICES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Abdoml Echography	Specialist?	N
CPT-4 Code(s):	76700	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	500	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.67
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	4.00
Annual Maintenance %:	4.00%	Supply Cost/Procedure:	$2.50
Equipment Purchase Price:	$20,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	60%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$15.42	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$7,712	$7,712	$7,712	$7,712	$7,712	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$5,000	$3,324	$3,324	$3,324	$3,324	$1,324	$0	$0
3 x % utilization	$3,000	$1,994	$1,994	$1,994	$1,994	$794	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$3,524	$3,524	$3,524	$3,524	$3,524	$0	$0
6 supplies	$0	$1,250	$1,250	$1,250	$1,250	$1,250	$0	$0
7 maintenance	$0	$480	$480	$480	$480	$480	$0	$0
8 overhead	$0	$33	$33	$33	$33	$33	$0	$0
9 Total Expenses/Yr.	$3,000	$7,281	$7,281	$7,281	$7,281	$6,081	$0	$0
10 Taxes Before Depreciation	$0	$148	$148	$148	$148	$562	$0	$0
11 Depreciation Tax Shield	$0	($207)	($207)	($207)	($207)	($481)	$0	$0
12 Net Cash Outflow/Yr.	$3,000	$7,223	$7,223	$7,223	$7,223	$6,163	$0	$0
13 NET CASH FLOW	($3,000)	$489	$489	$489	$489	$1,549	$0	$0
14 DISCOUNTED CASH FLOW	($3,000)	$444	$404	$367	$334	$962	$0	$0

15 PV of Interest Tax Shield $489.12 [See next page for calculation]

16 NET PRESENT VALUE AT P $0
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$2.50
X		
RESOURCE UNITS/PROCEDURE	0.67	1.00
X		
PROCEDURES/YEAR	500	500
= ANNUAL COST	$3,524	$1,250

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$800.00
X		
RESOURCE UNITS/YEAR	4.0	1.0
X		
PERCENTAGE UTILIZATION	60%	60%
= ANNUAL COST	$33	$480

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	9000.00	540.00	186.30	175.75
Year 2	7200.00	432.00	149.04	132.65
Year 3	5400.00	324.00	111.78	93.85
Year 4	3600.00	216.00	74.52	59.03
Year 5	1800.00	108.00	37.26	27.84
SUM				$489.12

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Abdmnl Echography

NON-SPECIALIST, LOW COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$15.42	500	10.00%	75.00%	60.00%	$20,000	$5,287	5
HIGH ANN. PROCEDURES	$14.25	625	10.00%	75.00%	60.00%	$20,000	$5,287	5
LOW ANN. PROCEDURES	$17.38	375	10.00%	75.00%	60.00%	$20,000	$5,287	5
HIGH COST OF CAPITAL	$15.58	500	12.50%	75.00%	60.00%	$20,000	$5,287	5
LOW COST OF CAPITAL	$15.27	500	7.50%	75.00%	60.00%	$20,000	$5,287	5
LOW % UTILIZATION	$13.89	500	10.00%	75.00%	45.00%	$20,000	$5,287	5
HIGH % UTILIZATION	$17.00	500	10.00%	75.00%	75.00%	$20,000	$5,287	5
HIGH % CAP. BORROWED	$14.90	500	10.00%	93.75%	60.00%	$20,000	$5,287	5
HIGH EQUIP. PRICE	$16.88	500	10.00%	75.00%	60.00%	$25,000	$5,287	5
LOW EQUIP. PRICE	$13.97	500	10.00%	75.00%	60.00%	$15,000	$5,287	5
HIGH OP. EXPENSES	$18.07	500	10.00%	75.00%	60.00%	$20,000	$6,609	5
LOW OP. EXPENSES	$12.78	500	10.00%	75.00%	60.00%	$20,000	$3,965	5
LONG USEFUL LIFE	$14.96	500	10.00%	75.00%	60.00%	$20,000	$3,965	6
SHORT USEFUL LIFE	$15.61	500	10.00%	75.00%	60.00%	$20,000	$3,965	4

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Abdoml Echography	Specialist?	N
CPT-4 Code(s):	76700	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	150	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.67
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	80.00
Annual Maintenance %:	8.00%	Supply Cost/Procedure:	$3.00
Equipment Purchase Price:	$30,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	60%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$48.28	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$7,241	$7,241	$7,241	$7,241	$7,241	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$7,500	$4,986	$4,986	$4,986	$4,986	$1,986	$0	$0
3 x % utilization	$4,500	$2,992	$2,992	$2,992	$2,992	$1,192	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$1,057	$1,057	$1,057	$1,057	$1,057	$0	$0
6 supplies	$0	$450	$450	$450	$450	$450	$0	$0
7 maintenance	$0	$1,440	$1,440	$1,440	$1,440	$1,440	$0	$0
8 overhead	$0	$658	$658	$658	$658	$658	$0	$0
9 Total Expenses/Yr.	$4,500	$6,596	$6,596	$6,596	$6,596	$4,796	$0	$0
10 Taxes Before Depreciation	$0	$223	$223	$223	$223	$844	$0	$0
11 Depreciation Tax Shield	$0	($311)	($311)	($311)	($311)	($722)	$0	$0
12 Net Cash Outflow/Yr.	$4,500	$6,508	$6,508	$6,508	$6,508	$4,918	$0	$0
13 NET CASH FLOW	($4,500)	$733	$733	$733	$733	$2,323	$0	$0
14 DISCOUNTED CASH FLOW	($4,500)	$666	$606	$551	$501	$1,442	$0	$0
15 PV of Interest Tax Shield	$733.68	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$3.00
X		
RESOURCE UNITS/PROCEDURE	0.67	1.00
X		
PROCEDURES/YEAR	150	150
= ANNUAL COST	$1,057	$450

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	80.0	1.0
X		
PERCENTAGE UTILIZATION	60%	60%
= ANNUAL COST	$658	$1,440

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	13500.00	810.00	279.45	263.63
Year 2	10800.00	648.00	223.56	198.97
Year 3	8100.00	486.00	167.67	140.78
Year 4	5400.00	324.00	111.78	88.54
Year 5	2700.00	162.00	55.89	41.76
SUM				$733.68

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

■■■ INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Abdom'l Echography	Specialist?	S
CPT-4 Code(s):	76700	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	1000	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.67
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	4.00
Annual Maintenance %:	4.00%	Supply Cost/Procedure:	$2.50
Equipment Purchase Price:	$65,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	40%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$19.43	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$19,433	$19,433	$19,433	$19,433	$19,433	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$16,250	$10,452	$10,452	$10,452	$10,452	$3,952	$0	$0
3 x % utilization	$6,500	$4,181	$4,181	$4,181	$4,181	$1,581	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$10,747	$10,747	$10,747	$10,747	$10,747	$0	$0
6 supplies	$0	$2,500	$2,500	$2,500	$2,500	$2,500	$0	$0
7 maintenance	$0	$1,040	$1,040	$1,040	$1,040	$1,040	$0	$0
8 overhead	$0	$22	$22	$22	$22	$22	$0	$0
9 Total Expenses/Yr.	$6,500	$18,490	$18,490	$18,490	$18,490	$15,890	$0	$0
10 Taxes Before Depreciation	$0	$326	$326	$326	$326	$1,223	$0	$0
11 Depreciation Tax Shield	$0	($448)	($448)	($448)	($448)	($994)	$0	$0
12 Net Cash Outflow/Yr.	$6,500	$18,367	$18,367	$18,367	$18,367	$16,118	$0	$0
13 NET CASH FLOW	($6,500)	$1,067	$1,067	$1,067	$1,067	$3,315	$0	$0
14 DISCOUNTED CASH FLOW	($6,500)	$970	$882	$801	$729	$2,058	$0	$0

15 PV of Interest Tax Shield******** [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$2.50
X		
RESOURCE UNITS/PROCEDURE	0.67	1.00
X		
PROCEDURES/YEAR	1000	1000
= ANNUAL COST	$10,747	$2,500

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	4.0	1.0
X		
PERCENTAGE UTILIZATION	40%	40%
= ANNUAL COST	$22	$1,040

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	19500.00	1170.00	403.65	380.80
Year 2	15600.00	936.00	322.92	287.40
Year 3	11700.00	702.00	242.19	203.35
Year 4	7800.00	468.00	161.46	127.89
Year 5	3900.00	234.00	80.73	60.33
SUM				*********

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Abdom] Echography	Specialist?	S
CPT-4 Code(s):	76700	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	500	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.67
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	80.00
Annual Maintenance %:	8.00%	Supply Cost/Procedure:	$3.00
Equipment Purchase Price:	$85,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	40%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$33.47	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$16,734	$16,734	$16,734	$16,734	$16,734	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$21,250	$13,668	$13,668	$13,668	$13,668	$5,168	$0	$0
3 x % utilization	$8,500	$5,467	$5,467	$5,467	$5,467	$2,067	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$5,373	$5,373	$5,373	$5,373	$5,373	$0	$0
6 supplies	$0	$1,500	$1,500	$1,500	$1,500	$1,500	$0	$0
7 maintenance	$0	$2,720	$2,720	$2,720	$2,720	$2,720	$0	$0
8 overhead	$0	$438	$438	$438	$438	$438	$0	$0
9 Total Expenses/Yr.	$8,500	$15,499	$15,499	$15,499	$15,499	$12,099	$0	$0
10 Taxes Before Depreciation	$0	$426	$426	$426	$426	$1,599	$0	$0
11 Depreciation Tax Shield	$0	($587)	($587)	($587)	($587)	($1,300)	$0	$0
12 Net Cash Outflow/Yr.	$8,500	$15,338	$15,338	$15,338	$15,338	$12,398	$0	$0
13 NET CASH FLOW	($8,500)	$1,395	$1,395	$1,395	$1,395	$4,335	$0	$0
14 DISCOUNTED CASH FLOW	($8,500)	$1,268	$1,153	$1,048	$953	$2,692	$0	$0

15 PV of Interest Tax Shield######### [See next page for calculation]

16 NET PRESENT VALUE AT P $0
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$3.00
X		
RESOURCE UNITS/PROCEDURE	0.67	1.00
X		
PROCEDURES/YEAR	500	500
= ANNUAL COST	$5,373	$1,500

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	80.0	1.0
X		
PERCENTAGE UTILIZATION	40%	40%
= ANNUAL COST	$438	$2,720

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	25500.00	1530.00	527.85	497.97
Year 2	20400.00	1224.00	422.28	375.83
Year 3	15300.00	918.00	316.71	265.92
Year 4	10200.00	612.00	211.14	167.24
Year 5	5100.00	306.00	105.57	78.89
SUM				*********

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Abdanl Echography

SPECIALIST, HIGH COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$33.47	500	10.00%	75.00%	40.00%	$85,000	$10,032	5
HIGH ANN. PROCEDURES	$29.52	625	10.00%	75.00%	40.00%	$85,000	$10,032	5
LOW ANN. PROCEDURES	$40.04	375	10.00%	75.00%	40.00%	$85,000	$10,032	5
HIGH COST OF CAPITAL	$33.91	500	12.50%	75.00%	40.00%	$85,000	$10,032	5
LOW COST OF CAPITAL	$33.03	500	7.50%	75.00%	40.00%	$85,000	$10,032	5
LOW % UTILIZATION	$28.41	500	10.00%	75.00%	30.00%	$85,000	$10,032	5
HIGH % UTILIZATION	$38.61	500	10.00%	75.00%	50.00%	$85,000	$10,032	5
HIGH % CAP. BORROWED	$31.89	500	10.00%	93.75%	40.00%	$85,000	$10,032	5
HIGH EQUIP. PRICE	$38.18	500	10.00%	75.00%	40.00%	$106,250	$10,032	5
LOW EQUIP. PRICE	$28.76	500	10.00%	75.00%	40.00%	$63,750	$10,032	5
HIGH OP. EXPENSES	$38.48	500	10.00%	75.00%	40.00%	$85,000	$12,540	5
LOW OP. EXPENSES	$28.45	500	10.00%	75.00%	40.00%	$85,000	$7,524	5
LONG USEFUL LIFE	$32.19	500	10.00%	75.00%	40.00%	$85,000	$7,524	6
SHORT USEFUL LIFE	$33.99	500	10.00%	75.00%	40.00%	$85,000	$7,524	4

3. ABDOMINAL ECHOGRAPHY
NORMAL-RETURN VOLUMES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Abdoml. Echography	Specialist?	N
CPT-4 Code(s):	76700	High-end/Low-end:	L

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	38.1	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.67
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	4.00
Annual Maintenance %:	4.00%	Supply Cost/Procedure:	$2.50
Equipment Purchase Price:	$20,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	60%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$86.64	Net Present Value:	($0)

	1 Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$3,301	$3,301	$3,301	$3,301	$3,301	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$5,000	$3,324	$3,324	$3,324	$3,324	$1,324	$0	$0
3 x % utilization	$3,000	$1,994	$1,994	$1,994	$1,994	$794	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$269	$269	$269	$269	$269	$0	$0
6 supplies	$0	$95	$95	$95	$95	$95	$0	$0
7 maintenance	$0	$480	$480	$480	$480	$480	$0	$0
8 overhead	$0	$33	$33	$33	$33	$33	$0	$0
9 Total Expenses/Yr.	$3,000	$2,871	$2,871	$2,871	$2,871	$1,671	$0	$0
10 Taxes Before Depreciation	$0	$148	$148	$148	$148	$562	$0	$0
11 Depreciation Tax Shield	$0	($207)	($207)	($207)	($207)	($481)	$0	$0
12 Net Cash Outflow/Yr.	$3,000	$2,812	$2,812	$2,812	$2,812	$1,752	$0	$0
13 NET CASH FLOW	($3,000)	$489	$489	$489	$489	$1,549	$0	$0
14 DISCOUNTED CASH FLOW	($3,000)	$444	$404	$367	$334	$962	$0	$0
15 PV of Interest Tax Shield	$489.12	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$2.50
X		
RESOURCE UNITS/PROCEDURE	0.67	1.00
X		
PROCEDURES/YEAR	38.10256	38.10256
= ANNUAL COST	$269	$95

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$800.00
X		
RESOURCE UNITS/YEAR	4.0	1.0
X		
PERCENTAGE UTILIZATION	60%	60%
= ANNUAL COST	$33	$480

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	9000.00	540.00	186.30	175.75
Year 2	7200.00	432.00	149.04	132.65
Year 3	5400.00	324.00	111.78	93.85
Year 4	3600.00	216.00	74.52	59.03
Year 5	1800.00	108.00	37.26	27.84
SUM				$489.12

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Abdoml. Echography

NON-SPECIALIST,LOW COST

	BMAD TECH	BREAK EVEN PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$86.64	38.1	10.00%	75.00%	60.00%	$20,000	$2,089	5
HIGH ANN. PROCEDURES	$86.64	38.1	10.00%	75.00%	60.00%	$20,000	$2,089	5
LOW ANN. PROCEDURES	$86.64	38.1	10.00%	75.00%	60.00%	$20,000	$2,089	5
HIGH COST OF CAPITAL	$86.64	39.1	12.50%	75.00%	60.00%	$20,000	$2,089	5
LOW COST OF CAPITAL	$86.64	37.1	7.50%	75.00%	60.00%	$20,000	$2,089	5
LOW % UTILIZATION	$86.64	28.1	10.00%	75.00%	45.00%	$20,000	$2,089	5
HIGH % UTILIZATION	$86.64	48.3	10.00%	75.00%	75.00%	$20,000	$2,089	5
HIGH % CAP. BORROWED	$86.64	34.7	10.00%	93.75%	60.00%	$20,000	$2,089	5
HIGH EQUIP. PRICE	$86.64	47.5	10.00%	75.00%	60.00%	$25,000	$2,089	5
LOW EQUIP. PRICE	$86.64	28.7	10.00%	75.00%	60.00%	$15,000	$2,089	5
HIGH OP. EXPENSES	$86.64	41.0	10.00%	75.00%	60.00%	$20,000	$2,611	5
LOW OP. EXPENSES	$86.64	35.3	10.00%	75.00%	60.00%	$20,000	$1,567	5
LONG USEFUL LIFE	$86.64	32.4	10.00%	75.00%	60.00%	$20,000	$1,567	6
SHORT USEFUL LIFE	$86.64	36.5	10.00%	75.00%	60.00%	$20,000	$1,567	4

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Abdom1 Echography	Specialist?	N
CPT-4 Code(s):	76700	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	75	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.67
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	80.00
Annual Maintenance %:	8.00%	Supply Cost/Procedure:	$3.00
Equipment Purchase Price:	$30,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	60%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$86.64	Net Present Value:	$0

1

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$6,487	$6,487	$6,487	$6,487	$6,487	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$7,500	$4,986	$4,986	$4,986	$4,986	$1,986	$0	$0
3 x % utilization	$4,500	$2,992	$2,992	$2,992	$2,992	$1,192	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$528	$528	$528	$528	$528	$0	$0
6 supplies	$0	$225	$225	$225	$225	$225	$0	$0
7 maintenance	$0	$1,440	$1,440	$1,440	$1,440	$1,440	$0	$0
8 overhead	$0	$658	$658	$658	$658	$658	$0	$0
9 Total Expenses/Yr.	$4,500	$5,842	$5,842	$5,842	$5,842	$4,042	$0	$0
10 Taxes Before Depreciation	$0	$223	$223	$223	$223	$844	$0	$0
11 Depreciation Tax Shield	$0	($311)	($311)	($311)	($311)	($722)	$0	$0
12 Net Cash Outflow/Yr.	$4,500	$5,754	$5,754	$5,754	$5,754	$4,164	$0	$0
13 NET CASH FLOW	($4,500)	$733	$733	$733	$733	$2,323	$0	$0
14 DISCOUNTED CASH FLOW	($4,500)	$666	$606	$551	$501	$1,443	$0	$0
15 PV of Interest Tax Shield	$733.68	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Abdaml Echography	Specialist?	S
CPT-4 Code(s):	76700	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	84	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.67
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	4.00
Annual Maintenance %:	4.00%	Supply Cost/Procedure:	$2.50
Equipment Purchase Price:	$65,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	40%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$86.64	Net Present Value:	$0

	1 Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$7,303	$7,303	$7,303	$7,303	$7,303	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$16,250	$10,452	$10,452	$10,452	$10,452	$3,952	$0	$0
3 x % utilization	$6,500	$4,181	$4,181	$4,181	$4,181	$1,581	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$906	$906	$906	$906	$906	$0	$0
6 supplies	$0	$211	$211	$211	$211	$211	$0	$0
7 maintenance	$0	$1,040	$1,040	$1,040	$1,040	$1,040	$0	$0
8 overhead	$0	$22	$22	$22	$22	$22	$0	$0
9 Total Expenses/Yr.	$6,500	$6,359	$6,359	$6,359	$6,359	$3,759	$0	$0
10 Taxes Before Depreciation	$0	$326	$326	$326	$326	$1,223	$0	$0
11 Depreciation Tax Shield	$0	($448)	($448)	($448)	($448)	($994)	$0	$0
12 Net Cash Outflow/Yr.	$6,500	$6,237	$6,237	$6,237	$6,237	$3,988	$0	$0
13 NET CASH FLOW	($6,500)	$1,067	$1,067	$1,067	$1,067	$3,315	$0	$0
14 DISCOUNTED CASH FLOW	($6,500)	$970	$882	$802	$729	$2,059	$0	$0
15 PV of Interest Tax Shield	$1,059.76	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Abdmnl. Echography	Specialist?	S
CPT-4 Code(s):	76700	High-end/Low-end:	H

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	135.3	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.67
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	80.00
Annual Maintenance %:	8.00%	Supply Cost/Procedure:	$3.00
Equipment Purchase Price:	$85,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	40%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$86.64	Net Present Value:	($0)

1

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$11,720	$11,720	$11,720	$11,720	$11,720	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$21,250	$13,668	$13,668	$13,668	$13,668	$5,168	$0	$0
3 x % utilization	$8,500	$5,467	$5,467	$5,467	$5,467	$2,067	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$1,454	$1,454	$1,454	$1,454	$1,454	$0	$0
6 supplies	$0	$406	$406	$406	$406	$406	$0	$0
7 maintenance	$0	$2,720	$2,720	$2,720	$2,720	$2,720	$0	$0
8 overhead	$0	$438	$438	$438	$438	$438	$0	$0
9 Total Expenses/Yr.	$8,500	$10,485	$10,485	$10,485	$10,485	$7,085	$0	$0
10 Taxes Before Depreciation	$0	$426	$426	$426	$426	$1,599	$0	$0
11 Depreciation Tax Shield	$0	($587)	($587)	($587)	($587)	($1,300)	$0	$0
12 Net Cash Outflow/Yr.	$8,500	$10,324	$10,324	$10,324	$10,324	$7,384	$0	$0
13 NET CASH FLOW	($8,500)	$1,395	$1,395	$1,395	$1,395	$4,335	$0	$0
14 DISCOUNTED CASH FLOW	($8,500)	$1,268	$1,153	$1,048	$953	$2,692	$0	$0

15 PV of Interest Tax Shield $1,385.85 [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$3.00
X		
RESOURCE UNITS/PROCEDURE	0.67	1.00
X		
PROCEDURES/YEAR	135.2668	135.2667795
= ANNUAL COST	$1,454	$406

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$6,800.00
X		
RESOURCE UNITS/YEAR	80.0	1.0
X		
PERCENTAGE UTILIZATION	40%	40%
= ANNUAL COST	$438	$2,720

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	25500.00	1530.00	527.85	497.97
Year 2	20400.00	1224.00	422.28	375.83
Year 3	15300.00	918.00	316.71	265.92
Year 4	10200.00	612.00	211.14	167.24
Year 5	5100.00	306.00	105.57	78.89
SUM				$1,385.85

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Abdmnl. Echography

SPECIALIST, HIGH COST

	BMAD TECH	BREAK EVEN PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$86.64	135.3	10.00%	75.00%	40.00%	$85,000	$5,427	5
HIGH ANN. PROCEDURES	$86.64	135.3	10.00%	75.00%	40.00%	$85,000	$5,427	5
LOW ANN. PROCEDURES	$86.64	135.3	10.00%	75.00%	40.00%	$85,000	$5,427	5
HIGH COST OF CAPITAL	$86.64	138.3	12.50%	75.00%	40.00%	$85,000	$5,427	5
LOW COST OF CAPITAL	$86.64	132.3	7.50%	75.00%	40.00%	$85,000	$5,427	5
LOW % UTILIZATION	$86.64	100.6	10.00%	75.00%	30.00%	$85,000	$5,427	5
HIGH % UTILIZATION	$86.64	170.5	10.00%	75.00%	50.00%	$85,000	$5,427	5
HIGH % CAP. BORROWED	$86.64	124.5	10.00%	93.75%	40.00%	$85,000	$5,427	5
HIGH EQUIP. PRICE	$86.64	167.6	10.00%	75.00%	40.00%	$106,250	$5,427	5
LOW EQUIP. PRICE	$86.64	103.0	10.00%	75.00%	40.00%	$63,750	$5,427	5
HIGH OP. EXPENSES	$86.64	153.3	10.00%	75.00%	40.00%	$85,000	$6,784	5
LOW OP. EXPENSES	$86.64	118.8	10.00%	75.00%	40.00%	$85,000	$4,070	5
LONG USEFUL LIFE	$86.64	110.5	10.00%	75.00%	40.00%	$85,000	$4,070	6
SHORT USEFUL LIFE	$86.64	122.3	10.00%	75.00%	40.00%	$85,000	$4,070	4

4. EKG

4. EKG
NORMAL-RETURN PRICES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	EKG	Specialist?	No
CPT-4 Code(s):	93005	High-end/Low-end:	Low

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	425	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.12
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	7.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.00
Equipment Purchase Price:	$4,000	Assumed Useful Life (Yrs):	12.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	50%	Loan Interest Rate:	6%
Technical Component Price:	$8.17	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$3,473	$3,473	$3,473	$3,473	$3,473	$3,473	$3,473
CASH OUTFLOWS								
2 Equip. purchase & salvage	$2,000	$472	$472	$472	$472	$472	$0	$0
3 x % utilization	$2,000	$472	$472	$472	$472	$472	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$537	$537	$537	$537	$537	$537	$537
6 supplies	$0	$2,125	$2,125	$2,125	$2,125	$2,125	$2,125	$2,125
7 maintenance	$0	$200	$200	$200	$200	$200	$200	$200
8 overhead	$0	$96	$96	$96	$96	$96	$96	$96
9 Total Expenses/Yr.	$2,000	$3,429	$3,429	$3,429	$3,429	$3,429	$2,957	$2,957
10 Taxes Before Depreciation	$0	$15	$15	$15	$15	$15	$178	$178
11 Depreciation Tax Shield	$0	($138)	($138)	($138)	($138)	($301)	$0	$0
12 Net Cash Outflow/Yr.	$2,000	$3,306	$3,306	$3,306	$3,306	$3,144	$3,135	$3,135
13 NET CASH FLOW	($2,000)	$166	$166	$166	$166	$329	$338	$338
14 DISCOUNTED CASH FLOW	($2,000)	$151	$138	$125	$114	$204	$191	$173

15 PV of Interest Tax Shield $108.69 (See next page for calculation)

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
CASH INFLOWS							
1 Revenue From Test	$3,473	$3,473	$3,473	$3,473	$3,473	$0	$0
CASH OUTFLOWS							
2 Equip. purchase & salvage	$0	$0	$0	$0	($400)	$0	$0
3 x % utilization	$0	$0	$0	$0	($400)	$0	$0
4 Marginal Op. Expenses/Yr.							
5 technician	$537	$537	$537	$537	$537	$0	$0
6 supplies	$2,125	$2,125	$2,125	$2,125	$2,125	$0	$0
7 maintenance	$200	$200	$200	$200	$200	$0	$0
8 overhead	$96	$96	$96	$96	$96	$0	$0
9 Total Expenses/Yr.	$2,957	$2,957	$2,957	$2,957	$2,557	$0	$0
10 Taxes Before Depreciation	$178	$178	$178	$178	$316	$0	$0
11 Depreciation Tax Shield	$0	$0	$0	$0	$0	$0	$0
12 Net Cash Outflow/Yr.	$3,135	$3,135	$3,135	$3,135	$2,873	$0	$0
13 NET CASH FLOW	$338	$338	$338	$338	$600	$0	$0
14 DISCOUNTED CASH FLOW	$173	$158	$143	$130	$191	$0	$0

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$5.00
X		
RESOURCE UNITS/PROCEDURE	0.12	1.00
X		
PROCEDURES/YEAR	425	425
= ANNUAL COST	$537	$2,125

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$200
X		
RESOURCE UNITS/YEAR	7.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$96	$200

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	2000.00	120.00	41.40	39.06
Year 2	1600.00	96.00	33.12	29.48
Year 3	1200.00	72.00	24.84	20.86
Year 4	800.00	48.00	16.56	13.12
Year 5	400.00	24.00	8.28	6.19
SUM				$108.69

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: EKG

NON-SPECIALIST, LOW COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$8.17	425	10.00%	50.00%	100.00%	$4,000	$2,957	12
HIGH ANN. PROCEDURES	$7.79	531.25	10.00%	50.00%	100.00%	$4,000	$2,957	12
LOW ANN. PROCEDURES	$8.81	318.75	10.00%	50.00%	100.00%	$4,000	$2,957	12
HIGH COST OF CAPITAL	$8.32	425	12.50%	50.00%	100.00%	$4,000	$2,957	12
LOW COST OF CAPITAL	$8.02	425	7.50%	50.00%	100.00%	$4,000	$2,957	12
LOW % UTILIZATION	$7.68	425	10.00%	50.00%	75.00%	$4,000	$2,957	12
HIGH % UTILIZATION	$8.17	425	10.00%	50.00%	100.00%	$4,000	$2,957	12
HIGH % CAP. BORROWED	$8.11	425	10.00%	62.50%	100.00%	$4,000	$2,957	12
HIGH EQUIP. PRICE	$8.59	425	10.00%	50.00%	100.00%	$5,000	$2,957	12
LOW EQUIP. PRICE	$7.76	425	10.00%	50.00%	100.00%	$3,000	$2,957	12
HIGH OP. EXPENSES	$9.92	425	10.00%	50.00%	100.00%	$4,000	$3,697	12
LOW OP. EXPENSES	$6.43	425	10.00%	50.00%	100.00%	$4,000	$2,216	12
LONG USEFUL LIFE	$8.17	425	10.00%	50.00%	100.00%	$4,000	$2,957	12
SHORT USEFUL LIFE	$8.37	425	10.00%	50.00%	100.00%	$4,000	$2,957	7

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	EKG	Specialist?	No
CPT-4 Code(s):	93005	High-end/Low-end:	High

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	170	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	0.12
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	7.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.00
Equipment Purchase Price:	$5,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$14.63	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$2,487	$2,487	$2,487	$2,487	$2,487	$2,487	$2,487
CASH OUTFLOWS								
2 Equip. purchase & salvage	$5,000	$0	$0	$0	$0	$0	$0	$0
3 x % utilization	$5,000	$0	$0	$0	$0	$0	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$203	$203	$203	$203	$203	$203	$203
6 supplies	$0	$850	$850	$850	$850	$850	$850	$850
7 maintenance	$0	$300	$300	$300	$300	$300	$300	$300
8 overhead	$0	$96	$96	$96	$96	$96	$96	$96
9 Total Expenses/Yr.	$5,000	$1,449	$1,449	$1,449	$1,449	$1,449	$1,449	$1,449
10 Taxes Before Depreciation	$0	$358	$358	$358	$358	$358	$358	$358
11 Depreciation Tax Shield	$0	($414)	($414)	($414)	($414)	($414)	$0	$0
12 Net Cash Outflow/Yr.	$5,000	$1,393	$1,393	$1,393	$1,393	$1,393	$1,807	$1,807
13 NET CASH FLOW	($5,000)	$1,094	$1,094	$1,094	$1,094	$1,094	$680	$680
14 DISCOUNTED CASH FLOW	($5,000)	$994	$904	$822	$747	$679	$384	$349
15 PV of Interest Tax Shield	$0.00	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
CASH INFLOWS							
1 Revenue From Test	$2,487	$2,487	$2,487	$0	$0	$0	$0
CASH OUTFLOWS							
2 Equip. purchase & salvage	$0	$0	($600)	$0	$0	$0	$0
3 x % utilization	$0	$0	($600)	$0	$0	$0	$0
4 Marginal Op. Expenses/Yr.							
5 technician	$203	$203	$203	$0	$0	$0	$0
6 supplies	$350	$850	$850	$0	$0	$0	$0
7 maintenance	$300	$300	$300	$0	$0	$0	$0
8 overhead	$96	$96	$96	$0	$0	$0	$0
9 Total Expenses/Yr.	$1,449	$1,449	$849	$0	$0	$0	$0
10 Taxes Before Depreciation	$358	$358	$565	$0	$0	$0	$0
11 Depreciation Tax Shield	$0	$0	$0	$0	$0	$0	$0
12 Net Cash Outflow/Yr.	$1,807	$1,807	$1,414	$0	$0	$0	$0
13 NET CASH FLOW	$680	$680	$1,073	$0	$0	$0	$0
14 DISCOUNTED CASH FLOW	$349	$317	$455	$0	$0	$0	$0

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$5.00
X		
RESOURCE UNITS/PROCEDURE	0.12	1.00
X		
PROCEDURES/YEAR	170	170
= ANNUAL COST	$203	$850

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$300.00
X		
RESOURCE UNITS/YEAR	7.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$96	$300

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	EKG	Specialist?	Yes
CPT-4 Code(s):	93005	High-end/Low-end:	Low

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	850	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	0.17
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	7.00
Annual Maintenance %:	0.50%	Supply Cost/Procedure:	$5.00
Equipment Purchase Price:	$10,000	Assumed Useful Life (Yrs):	8.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$9.27	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$7,877	$7,877	$7,877	$7,877	$7,877	$7,877	$7,877
CASH OUTFLOWS								
2 Equip. purchase & salvage	$10,000	$0	$0	$0	$0	$0	$0	$0
3 x % utilization	$10,000	$0	$0	$0	$0	$0	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$1,481	$1,481	$1,481	$1,481	$1,481	$1,481	$1,481
6 supplies	$0	$4,250	$4,250	$4,250	$4,250	$4,250	$4,250	$4,250
7 maintenance	$0	$50	$50	$50	$50	$50	$50	$50
8 overhead	$0	$96	$96	$96	$96	$96	$96	$96
9 Total Expenses/Yr.	$10,000	$5,877	$5,877	$5,877	$5,877	$5,877	$5,877	$5,877
10 Taxes Before Depreciation	$0	$690	$690	$690	$690	$690	$690	$690
11 Depreciation Tax Shield	$0	($690)	($690)	($690)	($690)	($690)	$0	$0
12 Net Cash Outflow/Yr.	$10,000	$5,877	$5,877	$5,877	$5,877	$5,877	$6,567	$6,567
13 NET CASH FLOW	($10,000)	$2,000	$2,000	$2,000	$2,000	$2,000	$1,310	$1,310
14 DISCOUNTED CASH FLOW	($10,000)	$1,818	$1,653	$1,502	$1,366	$1,242	$739	$672
15 PV of Interest Tax Shield	$0.00 [See next page for calculation]							
16 NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
CASH INFLOWS							
1 Revenue From Test	$7,877	$0	$0	$0	$0	$0	$0
CASH OUTFLOWS							
2 Equip. purchase & salvage	($1,000)	$0	$0	$0	$0	$0	$0
3 x % utilization	($1,000)	$0	$0	$0	$0	$0	$0
4 Marginal Op. Expenses/Yr.							
5 technician	$1,481	$0	$0	$0	$0	$0	$0
6 supplies	$4,250	$0	$0	$0	$0	$0	$0
7 maintenance	$50	$0	$0	$0	$0	$0	$0
8 overhead	$96	$0	$0	$0	$0	$0	$0
9 Total Expenses/Yr.	$4,877	$0	$0	$0	$0	$0	$0
10 Taxes Before Depreciation	$1,035	$0	$0	$0	$0	$0	$0
11 Depreciation Tax Shield	$0	$0	$0	$0	$0	$0	$0
12 Net Cash Outflow/Yr.	$5,912	$0	$0	$0	$0	$0	$0
13 NET CASH FLOW	$1,965	$0	$0	$0	$0	$0	$0
14 DISCOUNTED CASH FLOW	$1,008	$0	$0	$0	$0	$0	$0

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$5.00
X		
RESOURCE UNITS/PROCEDURE	0.17	1.00
X		
PROCEDURES/YEAR	950	850
= ANNUAL COST	$1,481	$4,250

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$50
X		
RESOURCE UNITS/YEAR	7.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$96	$50

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	EKG	Specialist?	Yes
CPT-4 Code(s.):	93005	High-end/Low-end:	High

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	700	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.20
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	7.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$5.00
Equipment Purchase Price:	$13,000	Assumed Useful Life (Yrs):	8.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$13.92	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$9,741	$9,741	$9,741	$9,741	$9,741	$9,741	$9,741
CASH OUTFLOWS								
2 Equip. purchase & salvage	$13,000	$0	$0	$0	$0	$0	$0	$0
3 x % utilization	$13,000	$0	$0	$0	$0	$0	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$2,246	$2,246	$2,246	$2,246	$2,246	$2,246	$2,246
6 supplies	$0	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500
7 maintenance	$0	$1,300	$1,300	$1,300	$1,300	$1,300	$1,300	$1,300
8 overhead	$0	$96	$96	$96	$96	$96	$96	$96
9 Total Expenses/Yr.	$13,000	$7,142	$7,142	$7,142	$7,142	$7,142	$7,142	$7,142
10 Taxes Before Depreciation	$0	$897	$897	$897	$897	$897	$897	$897
11 Depreciation Tax Shield	$0	($897)	($897)	($897)	($897)	($897)	$0	$0
12 Net Cash Outflow/Yr.	$13,000	$7,141	$7,141	$7,141	$7,141	$7,141	$8,038	$8,038
13 NET CASH FLOW	($13,000)	$2,600	$2,600	$2,600	$2,600	$2,600	$1,703	$1,703
14 DISCOUNTED CASH FLOW	($13,000)	$2,363	$2,148	$1,953	$1,776	$1,614	$961	$874
15 PV of Interest Tax Shield	$0.00 [See next page for calculation]							
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

		Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
	CASH INFLOWS						
1	Revenue From Test	$9,741	$0	$0	$0	$0	$0	$0
	CASH OUTFLOWS						
2	Equip. purchase & salvage	($1,300)	$0	$0	$0	$0	$0	$0
3	% utilization	($1,300)	$0	$0	$0	$0	$0	$0
4	Marginal Op. Expenses/Yr.							
5	technician	$2,246	$0	$0	$0	$0	$0	$0
6	supplies	$3,500	$0	$0	$0	$0	$0	$0
7	maintenance	$1,300	$0	$0	$0	$0	$0	$0
8	overhead	$96	$0	$0	$0	$0	$0	$0
9	Total Expenses/Yr.	$5,842	$0	$0	$0	$0	$0	$0
10	Taxes Before Depreciation	$1,345	$0	$0	$0	$0	$0	$0
11	Depreciation Tax Shield	$0	$0	$0	$0	$0	$0	$0
12	Net Cash Outflow/Yr.	$7,187	$0	$0	$0	$0	$0	$0
13	NET CASH FLOW	$2,554	$0	$0	$0	$0	$0	$0
14	DISCOUNTED CASH FLOW	$1,311	$0	$0	$0	$0	$0	$0

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$5.00
X		
RESOURCE UNITS/PROCEDURE	0.20	1.00
X		
PROCEDURES/YEAR	700	700
= ANNUAL COST	$2,248	$3,500

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$1,300
X		
RESOURCE UNITS/YEAR	7.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$96	$1,300

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: E+B

SPECIALIST, HIGH COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$13.92	700	10.00%	0.00%	100.00%	$13,000	$7,142	8
HIGH ANN. PROCEDURES	$12.78	875	10.00%	0.00%	100.00%	$13,000	$7,142	8
LOW ANN. PROCEDURES	$15.82	525	10.00%	0.00%	100.00%	$13,000	$7,142	8
HIGH COST OF CAPITAL	$14.38	700	12.50%	0.00%	100.00%	$13,000	$7,142	8
LOW COST OF CAPITAL	$13.48	700	7.50%	0.00%	100.00%	$13,000	$7,142	8
LOW % UTILIZATION	$12.49	700	10.00%	0.00%	75.00%	$13,000	$7,142	8
HIGH % UTILIZATION	$13.92	700	10.00%	0.00%	100.00%	$13,000	$7,142	8
HIGH % CAP. BORROWED	$13.57	700	10.00%	25.00%	100.00%	$13,000	$7,142	8
HIGH EQUIP. PRICE	$15.31	700	10.00%	0.00%	100.00%	$16,250	$7,142	8
LOW EQUIP. PRICE	$12.52	700	10.00%	0.00%	100.00%	$9,750	$7,142	8
HIGH OP. EXPENSES	$16.47	700	10.00%	0.00%	100.00%	$13,000	$8,927	8
LOW OP. EXPENSES	$11.36	700	10.00%	0.00%	100.00%	$13,000	$5,356	8
LONG USEFUL LIFE	$13.41	700	10.00%	0.00%	100.00%	$13,000	$7,142	10
SHORT USEFUL LIFE	$14.76	700	10.00%	0.00%	100.00%	$13,000	$7,142	6

4. EKG
NORMAL-RETURN VOLUMES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	EKG	Specialist?	No
CPT-4 Code(s):	93005	High-end/Low-end:	Low

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	212	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.12
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	7.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.00
Equipment Purchase Price:	$4,000	Assumed Useful Life (Yrs):	12.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	50%	Loan Interest Rate:	6%
Technical Component Price:	$9.56	Net Present Value:	($0)

1

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$2,028	$2,028	$2,028	$2,028	$2,028	$2,028	$2,028
CASH OUTFLOWS								
2 Equip. purchase & salvage	$2,000	$472	$472	$472	$472	$472	$0	$0
3 x % utilization	$2,000	$472	$472	$472	$472	$472	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$268	$268	$268	$268	$268	$268	$268
6 supplies	$0	$1,060	$1,060	$1,060	$1,060	$1,060	$1,060	$1,060
7 maintenance	$0	$200	$200	$200	$200	$200	$200	$200
8 overhead	$0	$96	$96	$96	$96	$96	$96	$96
9 Total Expenses/Yr.	$2,000	$2,096	$2,096	$2,096	$2,096	$2,096	$1,624	$1,624
10 Taxes Before Depreciation	$0	($24)	($24)	($24)	($24)	($24)	$139	$139
11 Depreciation Tax Shield	$0	($138)	($138)	($138)	($139)	($301)	$0	$0
12 Net Cash Outflow/Yr.	$2,000	$1,934	$1,934	$1,934	$1,934	$1,772	$1,763	$1,763
13 NET CASH FLOW	($2,000)	$93	$93	$93	$93	$256	$264	$264
14 DISCOUNTED CASH FLOW	($2,000)	$85	$77	$70	$64	$159	$149	$136
15 PV of Interest Tax Shield	$108.69	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$5.00
X		
RESOURCE UNITS/PROCEDURE	0.12	1.00
X		
PROCEDURES/YEAR	212.085	212.085
= ANNUAL COST	$268	$1,060

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$200.00
X		
RESOURCE UNITS/YEAR	7.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$96	$200

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	2000.00	120.00	41.40	39.06
Year 2	1600.00	96.00	33.12	29.48
Year 3	1200.00	72.00	24.84	20.86
Year 4	800.00	48.00	16.56	13.12
Year 5	400.00	24.00	8.28	6.19
SUM				$108.69

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: EKG

NON-SPECIALIST, LOW COST

	BMAD TECH	BREAK EVEN PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$9.56	212	10.00%	50.00%	100.00%	$4,000	$1,354	12
HIGH ANN. PROCEDURES	$9.56	212	10.00%	50.00%	100.00%	$4,000	$1,354	12
LOW ANN. PROCEDURES	$9.56	212	10.00%	50.00%	100.00%	$4,000	$1,354	12
HIGH COST OF CAPITAL	$9.56	221	12.50%	50.00%	100.00%	$4,000	$1,354	12
LOW COST OF CAPITAL	$9.56	204	7.50%	50.00%	100.00%	$4,000	$1,354	12
LOW % UTILIZATION	$9.56	157	10.00%	50.00%	75.00%	$4,000	$1,354	12
HIGH % UTILIZATION	$9.56	212	10.00%	50.00%	100.00%	$4,000	$1,354	12
HIGH % CAP. BORROWED	$9.56	205	10.00%	62.50%	100.00%	$4,000	$1,354	12
HIGH EQUIP. PRICE	$9.56	258	10.00%	50.00%	100.00%	$5,000	$1,354	12
LOW EQUIP. PRICE	$9.56	166	10.00%	50.00%	100.00%	$3,000	$1,354	12
HIGH OP. EXPENSES	$9.56	447	10.00%	50.00%	100.00%	$4,000	$1,693	12
LOW OP. EXPENSES	$9.56	129	10.00%	50.00%	100.00%	$4,000	$1,016	12
LONG USEFUL LIFE	$9.56	150	10.00%	50.00%	100.00%	$4,000	$1,016	15
SHORT USEFUL LIFE	$9.56	155	10.00%	50.00%	100.00%	$4,000	$1,016	9

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	EKG	Specialist?	No
CPT-4 Code(s):	93005	High-end/Low-end:	High

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	379	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	0.12
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	7.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.00
Equipment Purchase Price:	$6,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$9.56	Net Present Value:	($0)

1

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$3,628	$3,628	$3,628	$3,628	$3,628	$3,628	$3,628
CASH OUTFLOWS								
2 Equip. purchase & salvage	$6,000	$0	$0	$0	$0	$0	$0	$0
3 x % utilization	$6,000	$0	$0	$0	$0	$0	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$454	$454	$454	$454	$454	$454	$454
6 supplies	$0	$1,897	$1,897	$1,897	$1,897	$1,897	$1,897	$1,897
7 maintenance	$0	$300	$300	$300	$300	$300	$300	$300
8 overhead	$0	$96	$96	$96	$96	$96	$96	$96
9 Total Expenses/Yr.	$6,000	$2,747	$2,747	$2,747	$2,747	$2,747	$2,747	$2,747
10 Taxes Before Depreciation	$0	$304	$304	$304	$304	$304	$304	$304
11 Depreciation Tax Shield	$0	($414)	($414)	($414)	($414)	($414)	$0	$0
12 Net Cash Outflow/Yr.	$6,000	$2,637	$2,637	$2,637	$2,637	$2,637	$3,051	$3,051
13 NET CASH FLOW	($6,000)	$991	$991	$991	$991	$991	$577	$577
14 DISCOUNTED CASH FLOW	($6,000)	$901	$819	$744	$677	$615	$326	$296

15 PV of Interest Tax Shield $0.00 [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$5.00
X		
RESOURCE UNITS/PROCEDURE	0.12	1.00
X		
PROCEDURES/YEAR	379.4667	379.4667
= ANNUAL COST	$454	$1,897

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$300.00
X		
RESOURCE UNITS/YEAR	7.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$96	$300

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	EKG	Specialist?	Yes
CPT-4 Code(s):	93005	High-end/Low-end:	Low

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	761	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	0.17
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	7.00
Annual Maintenance %:	0.50%	Supply Cost/Procedure:	$5.00
Equipment Purchase Price:	$10,000	Assumed Useful Life (Yrs):	8.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$9.56	Net Present Value:	($0)

1

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$7,279	$7,279	$7,279	$7,279	$7,279	$7,279	$7,279
CASH OUTFLOWS								
2 Equip. purchase & salvage	$10,000	$0	$0	$0	$0	$0	$0	$0
3 x % utilization	$10,000	$0	$0	$0	$0	$0	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$1,327	$1,327	$1,327	$1,327	$1,327	$1,327	$1,327
6 supplies	$0	$3,807	$3,807	$3,807	$3,807	$3,807	$3,807	$3,807
7 maintenance	$0	$50	$50	$50	$50	$50	$50	$50
8 overhead	$0	$96	$96	$96	$96	$96	$96	$96
9 Total Expenses/Yr.	$10,000	$5,280	$5,280	$5,280	$5,280	$5,280	$5,280	$5,280
10 Taxes Before Depreciation	$0	$690	$690	$690	$690	$690	$690	$690
11 Depreciation Tax Shield	$0	($690)	($690)	($690)	($690)	($690)	$0	$0
12 Net Cash Outflow/Yr.	$10,000	$5,280	$5,280	$5,280	$5,280	$5,280	$5,970	$5,970
13 NET CASH FLOW	($10,000)	$2,000	$2,000	$2,000	$2,000	$2,000	$1,310	$1,310
14 DISCOUNTED CASH FLOW	($10,000)	$1,818	$1,653	$1,502	$1,366	$1,242	$739	$672

15 PV of Interest Tax Shield $0.00 [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$5.00
X		
RESOURCE UNITS/PROCEDURE	0.17	1.00
X		
PROCEDURES/YEAR	761.4399	761.4399
= ANNUAL COST	$1,327	$3,807

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$50.00
X		
RESOURCE UNITS/YEAR	7.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$96	$50

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	EKG	Specialist?	Yes
CPT-4 Code(s):	93005	High-end/Low-end:	High

150 INPUT DATA AND ASSUMPTIONS 33

Assumed # Procedures/Yr.:	2955	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.20
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	7.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$5.00
Equipment Purchase Price:	$13,000	Assumed Useful Life (Yrs):	8.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$9.56	Net Present Value:	$0

1

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$28,252	$28,252	$28,252	$28,252	$28,252	$28,252	$28,252
CASH OUTFLOWS								
2 Equip. purchase & salvage	$13,000	$0	$0	$0	$0	$0	$0	$0
3 x % utilization	$13,000	$0	$0	$0	$0	$0	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$9,480	$9,480	$9,480	$9,480	$9,480	$9,480	$9,480
6 supplies	$0	$14,776	$14,776	$14,776	$14,776	$14,776	$14,776	$14,776
7 maintenance	$0	$1,300	$1,300	$1,300	$1,300	$1,300	$1,300	$1,300
8 overhead	$0	$96	$96	$96	$96	$96	$96	$96
9 Total Expenses/Yr.	$13,000	$25,652	$25,652	$25,652	$25,652	$25,652	$25,652	$25,652
10 Taxes Before Depreciation	$0	$897	$897	$897	$897	$897	$897	$897
11 Depreciation Tax Shield	$0	($897)	($897)	($897)	($897)	($897)	$0	$0
12 Net Cash Outflow/Yr.	$13,000	$25,652	$25,652	$25,652	$25,652	$25,652	$26,549	$26,549
13 NET CASH FLOW	($13,000)	$2,600	$2,600	$2,600	$2,600	$2,600	$1,703	$1,703
14 DISCOUNTED CASH FLOW	($13,000)	$2,363	$2,148	$1,953	$1,776	$1,614	$961	$874
15 PV of Interest Tax Shield	$0.00	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$5.00
X		
RESOURCE UNITS/PROCEDURE	0.20	1.00
X		
PROCEDURES/YEAR	2955.183	2955.183
= ANNUAL COST	$9,480	$14,776

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	#########
X		
RESOURCE UNITS/YEAR	7.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$96	$1,300

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: EKG

SPECIALIST, HIGH COST

	BMAD TECH	BREAK EVEN PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$9.56	2955	10.00%	0.00%	100.00%	$13,000	$12,895	8
HIGH ANN. PROCEDURES	$9.56	2955	10.00%	0.00%	100.00%	$13,000	$12,895	8
LOW ANN. PROCEDURES	$9.56	2955	10.00%	0.00%	100.00%	$13,000	$12,895	8
HIGH COST OF CAPITAL	$9.56	3193	12.50%	0.00%	100.00%	$13,000	$12,895	8
LOW COST OF CAPITAL	$9.56	2728	7.50%	0.00%	100.00%	$13,000	$12,895	8
LOW % UTILIZATION	$9.56	2216	10.00%	0.00%	75.00%	$13,000	$12,895	8
HIGH % UTILIZATION	$9.56	2955	10.00%	0.00%	100.00%	$13,000	$12,895	8
HIGH % CAP. BORROWED	$9.56	2780	10.00%	25.00%	100.00%	$13,000	$12,895	8
HIGH EQUIP. PRICE	$9.56	3676	10.00%	0.00%	100.00%	$16,250	$12,895	8
LOW EQUIP. PRICE	$9.56	2234.0	10.00%	0.00%	100.00%	$9,750	$12,895	8
HIGH OP. EXPENSES	$9.56		10.00%	0.00%	100.00%	$13,000	$16,119	8
LOW OP. EXPENSES	$9.56		10.00%	0.00%	100.00%	$13,000	$9,671	8
LONG USEFUL LIFE	$9.56	2444.0	10.00%	0.00%	100.00%	$13,000	$9,671	10
SHORT USEFUL LIFE	$9.56	3397.0	10.00%	0.00%	100.00%	$13,000	$9,671	6

5. NON-INVASIVE PERIPHERAL VASCULAR TESTING

5. NON-INVASIVE PERIPHERAL VASCULAR TESTING
NORMAL-RETURN PRICES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Periph. Vascular	Specialist?	N
CPT-4 Code(s):	93910	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	300	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.50
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	4.00
Annual Maintenance %:	3.50%	Supply Cost/Procedure:	$2.00
Equipment Purchase Price:	$5,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	60%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$10.62	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$3,185	$3,185	$3,185	$3,185	$3,185	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$5,000	$0	$0	$0	$0	($500)	$0	$0
3 x % utilization	$3,000	$0	$0	$0	$0	($300)	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$1,578	$1,578	$1,578	$1,578	$1,578	$0	$0
6 supplies	$0	$600	$600	$600	$600	$600	$0	$0
7 maintenance	$0	$105	$105	$105	$105	$105	$0	$0
8 overhead	$0	$33	$33	$33	$33	$33	$0	$0
9 Total Expenses/Yr.	$3,000	$2,316	$2,316	$2,316	$2,316	$2,016	$0	$0
10 Taxes Before Depreciation	$0	$300	$300	$300	$300	$403	$0	$0
11 Depreciation Tax Shield	$0	($207)	($207)	($207)	($207)	($103)	$0	$0
12 Net Cash Outflow/Yr.	$3,000	$2,409	$2,409	$2,409	$2,409	$2,316	$0	$0
13 NET CASH FLOW	($3,000)	$776	$776	$776	$776	$869	$0	$0
14 DISCOUNTED CASH FLOW	($3,000)	$706	$641	$583	$530	$540	$0	$0

15 PV of Interest Tax Shield $0.00 [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$2.00
X		
RESOURCE UNITS/PROCEDURE	0.50	1.00
X		
PROCEDURES/YEAR	300	300
= ANNUAL COST	$1,578	$600

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$175.00
X		
RESOURCE UNITS/YEAR	4.0	1.0
X		
PERCENTAGE UTILIZATION	60%	60%
= ANNUAL COST	$33	$105

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Periph. Vascular

NON-SPECIALIST, LOW COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$10.62	300	10.00%	0.00%	60.00%	$5,000	$2,316	5
HIGH ANN. PROCEDURES	$9.95	375	10.00%	0.00%	60.00%	$5,000	$2,316	5
LOW ANN. PROCEDURES	$11.73	225	10.00%	0.00%	60.00%	$5,000	$2,316	5
HIGH COST OF CAPITAL	$10.88	300	12.50%	0.00%	60.00%	$5,000	$2,316	5
LOW COST OF CAPITAL	$10.36	300	7.50%	0.00%	60.00%	$5,000	$2,316	5
LOW % UTILIZATION	$9.78	300	10.00%	0.00%	45.00%	$5,000	$2,316	5
HIGH % UTILIZATION	$11.45	300	10.00%	0.00%	75.00%	$5,000	$2,316	5
HIGH % CAP. BORROWED	$10.32	300	10.00%	25.00%	60.00%	$5,000	$2,316	5
HIGH EQUIP. PRICE	$11.43	300	10.00%	0.00%	60.00%	$6,250	$2,316	5
LOW EQUIP. PRICE	$9.80	300	10.00%	0.00%	60.00%	$3,750	$2,316	5
HIGH OP. EXPENSES	$12.55	300	10.00%	0.00%	60.00%	$5,000	$2,895	5
LOW OP. EXPENSES	$8.69	300	10.00%	0.00%	60.00%	$5,000	$1,737	5
LONG USEFUL LIFE	$10.31	300	10.00%	0.00%	60.00%	$5,000	$1,737	6
SHORT USEFUL LIFE	$10.69	300	10.00%	0.00%	60.00%	$5,000	$1,737	4

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Periph. Vascular	Specialist?	N
CPT-4 Code(s):	93910	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	150	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.50
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	80.00
Annual Maintenance %:	7.00%	Supply Cost/Procedure:	$3.00
Equipment Purchase Price:	$7,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	60%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$22.71	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$3,407	$3,407	$3,407	$3,407	$3,407	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$7,000	$0	$0	$0	$0	($700)	$0	$0
3 x % utilization	$4,200	$0	$0	$0	$0	($420)	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$789	$789	$789	$789	$789	$0	$0
6 supplies	$0	$450	$450	$450	$450	$450	$0	$0
7 maintenance	$0	$294	$294	$294	$294	$294	$0	$0
8 overhead	$0	$658	$658	$658	$658	$658	$0	$0
9 Total Expenses/Yr.	$4,200	$2,191	$2,191	$2,191	$2,191	$1,771	$0	$0
10 Taxes Before Depreciation	$0	$420	$420	$420	$420	$565	$0	$0
11 Depreciation Tax Shield	$0	($290)	($290)	($290)	($290)	($145)	$0	$0
12 Net Cash Outflow/Yr.	$4,200	$2,320	$2,320	$2,320	$2,320	$2,190	$0	$0
13 NET CASH FLOW	($4,200)	$1,087	$1,087	$1,087	$1,087	$1,217	$0	$0
14 DISCOUNTED CASH FLOW	($4,200)	$988	$898	$816	$742	$755	$0	$0
15 PV of Interest Tax Shield	$0.00	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$3.00
X		
RESOURCE UNITS/PROCEDURE	0.50	1.00
X		
PROCEDURES/YEAR	150	150
= ANNUAL COST	$789	$450

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$490.00
X		
RESOURCE UNITS/YEAR	80.0	1.0
X		
PERCENTAGE UTILIZATION	60%	60%
= ANNUAL COST	$658	$294

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Periph. Vascular	Specialist?	S
CPT-4 Code(s):	93910	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	1300	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.50
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	4.00
Annual Maintenance %:	3.50%	Supply Cost/Procedure:	$2.00
Equipment Purchase Price:	$70,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	30%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$13.74	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$17,865	$17,865	$17,865	$17,865	$17,865	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$17,500	$11,067	$11,067	$11,067	$11,067	$4,067	$0	$0
3 x % utilization	$5,250	$3,320	$3,320	$3,320	$3,320	$1,220	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$10,426	$10,426	$10,426	$10,426	$10,426	$0	$0
6 supplies	$0	$2,600	$2,600	$2,600	$2,600	$2,600	$0	$0
7 maintenance	$0	$735	$735	$735	$735	$735	$0	$0
8 overhead	$0	$16	$16	$16	$16	$16	$0	$0
9 Total Expenses/Yr.	$5,250	$17,098	$17,098	$17,098	$17,098	$14,998	$0	$0
10 Taxes Before Depreciation	$0	$265	$265	$265	$265	$989	$0	$0
11 Depreciation Tax Shield	$0	($362)	($362)	($362)	($362)	($783)	$0	$0
12 Net Cash Outflow/Yr.	$5,250	$17,000	$17,000	$17,000	$17,000	$15,204	$0	$0
13 NET CASH FLOW	($5,250)	$865	$865	$865	$865	$2,661	$0	$0
14 DISCOUNTED CASH FLOW	($5,250)	$786	$715	$650	$591	$1,652	$0	$0
15 PV of Interest Tax Shield	$855.96	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$2.00
X		
RESOURCE UNITS/PROCEDURE	0.50	1.00
X		
PROCEDURES/YEAR	1300	1300
= ANNUAL COST	$10,426	$2,600

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	4.0	1.0
X		
PERCENTAGE UTILIZATION	30%	30%
= ANNUAL COST	$16	$735

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	15750.00	945.00	326.02	307.57
Year 2	12600.00	756.00	260.82	232.13
Year 3	9450.00	567.00	195.61	164.24
Year 4	6300.00	378.00	130.41	103.30
Year 5	3150.00	189.00	65.20	48.72
SUM				$855.96

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Periph. Vascular	Specialist?	S
CPT-4 Code(s):	93910	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	500	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.50
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	80.00
Annual Maintenance %:	7.00%	Supply Cost/Procedure:	$3.00
Equipment Purchase Price:	$90,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	30%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$25.97	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$12,984	$12,984	$12,984	$12,984	$12,984	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$22,500	$14,229	$14,229	$14,229	$14,229	$5,229	$0	$0
3 x % utilization	$6,750	$4,269	$4,269	$4,269	$4,269	$1,569	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$4,010	$4,010	$4,010	$4,010	$4,010	$0	$0
6 supplies	$0	$1,500	$1,500	$1,500	$1,500	$1,500	$0	$0
7 maintenance	$0	$1,890	$1,890	$1,890	$1,890	$1,890	$0	$0
8 overhead	$0	$329	$329	$329	$329	$329	$0	$0
9 Total Expenses/Yr.	$6,750	$11,998	$11,998	$11,998	$11,998	$9,298	$0	$0
10 Taxes Before Depreciation	$0	$340	$340	$340	$340	$1,272	$0	$0
11 Depreciation Tax Shield	$0	($466)	($466)	($466)	($466)	($1,007)	$0	$0
12 Net Cash Outflow/Yr.	$6,750	$11,872	$11,872	$11,872	$11,872	$9,562	$0	$0
13 NET CASH FLOW	($6,750)	$1,112	$1,112	$1,112	$1,112	$3,422	$0	$0
14 DISCOUNTED CASH FLOW	($6,750)	$1,011	$919	$836	$760	$2,125	$0	$0

15 PV of Interest Tax Shield********* [See next page for calculation]

16 NET PRESENT VALUE AT P (= zero for break-even)	$0

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$3.00
X		
RESOURCE UNITS/PROCEDURE	0.50	1.00
X		
PROCEDURES/YEAR	500	500
= ANNUAL COST	$4,010	$1,500

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	80.0	1.0
X		
PERCENTAGE UTILIZATION	30%	30%
= ANNUAL COST	$329	$1,890

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	20250.00	1215.00	419.17	395.45
Year 2	16200.00	972.00	335.34	298.45
Year 3	12150.00	729.00	251.50	211.17
Year 4	8100.00	486.00	167.67	132.81
Year 5	4050.00	243.00	83.83	62.65
SUM				*********

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Periph. Vascular

SPECIALIST, HIGH COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$25.97	500	10.00%	75.00%	30.00%	$90,000	$7,729	5
HIGH ANN. PROCEDURES	$22.98	625	10.00%	75.00%	30.00%	$90,000	$7,729	5
LOW ANN. PROCEDURES	$30.95	375	10.00%	75.00%	30.00%	$90,000	$7,729	5
HIGH COST OF CAPITAL	$26.32	500	12.50%	75.00%	30.00%	$90,000	$7,729	5
LOW COST OF CAPITAL	$25.62	500	7.50%	75.00%	30.00%	$90,000	$7,729	5
LOW % UTILIZATION	$22.16	500	10.00%	75.00%	22.50%	$90,000	$7,729	5
HIGH % UTILIZATION	$29.83	500	10.00%	75.00%	37.50%	$90,000	$7,729	5
HIGH % CAP. BORROWED	$24.69	500	10.00%	93.75%	30.00%	$90,000	$7,729	5
HIGH EQUIP. PRICE	$29.54	500	10.00%	75.00%	30.00%	$112,500	$7,729	5
LOW EQUIP. PRICE	$22.40	500	10.00%	75.00%	30.00%	$67,500	$7,729	5
HIGH OP. EXPENSES	$29.83	500	10.00%	75.00%	30.00%	$90,000	$9,661	5
LOW OP. EXPENSES	$22.10	500	10.00%	75.00%	30.00%	$90,000	$5,797	5
LONG USEFUL LIFE	$24.97	500	10.00%	75.00%	30.00%	$90,000	$5,797	6
SHORT USEFUL LIFE	$26.39	500	10.00%	75.00%	30.00%	$90,000	$5,797	4

5. NON-INVASIVE PERIPHERAL VASCULAR TESTING
NORMAL-RETURN VOLUMES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Periph. Vascular	Specialist?	N
CPT-4 Code(s):	93910	High-end/Low-end:	L

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	15.0	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.50
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	4.00
Annual Maintenance %:	3.50%	Supply Cost/Procedure:	$2.00
Equipment Purchase Price:	$5,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	60%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$74.58	Net Present Value:	($0)

1

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$1,115	$1,115	$1,115	$1,115	$1,115	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$5,000	$0	$0	$0	$0	($500)	$0	$0
3 x % utilization	$3,000	$0	$0	$0	$0	($300)	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$79	$79	$79	$79	$79	$0	$0
6 supplies	$0	$30	$30	$30	$30	$30	$0	$0
7 maintenance	$0	$105	$105	$105	$105	$105	$0	$0
8 overhead	$0	$33	$33	$33	$33	$33	$0	$0
9 Total Expenses/Yr.	$3,000	$246	$246	$246	$246	($54)	$0	$0
10 Taxes Before Depreciation	$0	$300	$300	$300	$300	$403	$0	$0
11 Depreciation Tax Shield	$0	($207)	($207)	($207)	($207)	($103)	$0	$0
12 Net Cash Outflow/Yr.	$3,000	$339	$339	$339	$339	$246	$0	$0
13 NET CASH FLOW	($3,000)	$776	$776	$776	$776	$869	$0	$0
14 DISCOUNTED CASH FLOW	($3,000)	$706	$641	$583	$530	$540	$0	$0

15 PV of Interest Tax Shield $0.00 [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$2.00
X		
RESOURCE UNITS/PROCEDURE	0.50	1.00
X		
PROCEDURES/YEAR	14.95335	14.95335
= ANNUAL COST	$79	$30

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$175.00
X		
RESOURCE UNITS/YEAR	4.0	1.0
X		
PERCENTAGE UTILIZATION	60%	60%
= ANNUAL COST	$33	$105

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Periph. Vascular

NON-SPECIALIST ,LOW COST

	BMAD TECH	BREAK EVEN PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$74.58	15.0	10.00%	0.00%	60.00%	$5,000	$1,336	5
HIGH ANN. PROCEDURES	$74.58	15.0	10.00%	0.00%	60.00%	$5,000	$1,336	5
LOW ANN. PROCEDURES	$74.58	15.0	10.00%	0.00%	60.00%	$5,000	$1,336	5
HIGH COST OF CAPITA	$74.58	16.1	12.50%	0.00%	60.00%	$5,000	$1,336	5
LOW COST OF CAPITAL	$74.58	13.8	7.50%	0.00%	60.00%	$5,000	$1,336	5
LOW % UTILIZATION	$74.58	11.2	10.00%	0.00%	45.00%	$5,000	$1,336	5
HIGH % UTILIZATION	$74.58	18.7	10.00%	0.00%	75.00%	$5,000	$1,336	5
HIGH % CAP. BORROWED	$74.58	13.7	10.00%	25.00%	60.00%	$5,000	$1,336	5
HIGH EQUIP. PRICE	$74.58	18.6	10.00%	0.00%	60.00%	$6,250	$1,336	5
LOW EQUIP. PRICE	$74.58	11.3	10.00%	0.00%	60.00%	$3,750	$1,336	5
HIGH OP. EXPENSES	$74.58	15.9	10.00%	0.00%	60.00%	$5,000	$1,670	5
LOW OP. EXPENSES	$74.58	14.1	10.00%	0.00%	60.00%	$5,000	$1,002	5
LONG USEFUL LIFE	$74.58	12.7	10.00%	0.00%	60.00%	$5,000	$1,002	6
SHORT USEFUL LIFE	$74.58	14.4	10.00%	0.00%	60.00%	$5,000	$1,002	4

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Periph. Vascular	Specialist?	N
CPT-4 Code(s):	93910	High-end/Low-end:	H

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	32.7	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.50
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	80.00
Annual Maintenance %:	7.00%	Supply Cost/Procedure:	$3.00
Equipment Purchase Price:	$50,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	10%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$74.58	Net Present Value:	$0

1

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$2,438	$2,438	$2,438	$2,438	$2,438	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$7,000	$0	$0	$0	$0	($700)	$0	$0
3 x % utilization	$4,200	$0	$0	$0	$0	($420)	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$172	$172	$172	$172	$172	$0	$0
6 supplies	$0	$98	$98	$98	$98	$98	$0	$0
7 maintenance	$0	$294	$294	$294	$294	$294	$0	$0
8 overhead	$0	$658	$658	$658	$658	$658	$0	$0
9 Total Expenses/Yr.	$4,200	$1,222	$1,222	$1,222	$1,222	$802	$0	$0
10 Taxes Before Depreciation	$0	$420	$420	$420	$420	$565	$0	$0
11 Depreciation Tax Shield	$0	($290)	($290)	($290)	($290)	($145)	$0	$0
12 Net Cash Outflow/Yr.	$4,200	$1,352	$1,352	$1,352	$1,352	$1,221	$0	$0
13 NET CASH FLOW	($4,200)	$1,087	$1,087	$1,087	$1,087	$1,217	$0	$0
14 DISCOUNTED CASH FLOW	($4,200)	$988	$898	$816	$742	$756	$0	$0
15 PV of Interest Tax Shield	$0.00	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Periph. Vascular	Specialist?	S
CPT-4 Code(s):	93910	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	75.0	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.50
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	4.00
Annual Maintenance %:	3.50%	Supply Cost/Procedure:	$2.00
Equipment Purchase Price:	$70,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	30%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$74.58	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$5,590	$5,590	$5,590	$5,590	$5,590	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$17,500	$11,067	$11,067	$11,067	$11,067	$4,067	$0	$0
3 x % utilization	$5,250	$3,320	$3,320	$3,320	$3,320	$1,220	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$601	$601	$601	$601	$601	$0	$0
6 supplies	$0	$150	$150	$150	$150	$150	$0	$0
7 maintenance	$0	$735	$735	$735	$735	$735	$0	$0
8 overhead	$0	$16	$16	$16	$16	$16	$0	$0
9 Total Expenses/Yr.	$5,250	$4,823	$4,823	$4,823	$4,823	$2,723	$0	$0
10 Taxes Before Depreciation	$0	$265	$265	$265	$265	$989	$0	$0
11 Depreciation Tax Shield	$0	($362)	($362)	($362)	($362)	($783)	$0	$0
12 Net Cash Outflow/Yr.	$5,250	$4,725	$4,725	$4,725	$4,725	$2,929	$0	$0
13 NET CASH FLOW	($5,250)	$865	$865	$865	$865	$2,661	$0	$0
14 DISCOUNTED CASH FLOW	($5,250)	$786	$715	$650	$591	$1,652	$0	$0
15 PV of Interest Tax Shield	$855.96	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Periph. Vascular	Specialist?	S
CPT-4 Code(s):	93910	High-end/Low-end:	H

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	117.6	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.50
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	80.00
Annual Maintenance %:	7.00%	Supply Cost/Procedure:	$3.00
Equipment Purchase Price:	$90,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	30%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$74.58	Net Present Value:	($0)

1

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$8,770	$8,770	$8,770	$8,770	$8,770	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$22,500	$14,229	$14,229	$14,229	$14,229	$5,229	$0	$0
3 x % utilization	$6,750	$4,269	$4,269	$4,269	$4,269	$1,569	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$943	$943	$943	$943	$943	$0	$0
6 supplies	$0	$353	$353	$353	$353	$353	$0	$0
7 maintenance	$0	$1,890	$1,890	$1,890	$1,890	$1,890	$0	$0
8 overhead	$0	$329	$329	$329	$329	$329	$0	$0
9 Total Expenses/Yr.	$6,750	$7,783	$7,783	$7,783	$7,783	$5,083	$0	$0
10 Taxes Before Depreciation	$0	$340	$340	$340	$340	$1,272	$0	$0
11 Depreciation Tax Shield	$0	($466)	($466)	($466)	($466)	($1,007)	$0	$0
12 Net Cash Outflow/Yr.	$6,750	$7,658	$7,658	$7,658	$7,658	$5,348	$0	$0
13 NET CASH FLOW	($6,750)	$1,112	$1,112	$1,112	$1,112	$3,422	$0	$0
14 DISCOUNTED CASH FLOW	($6,750)	$1,011	$919	$835	$759	$2,125	$0	$0

15 PV of Interest Tax Shield $1,100.52 [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$3.00
X		
RESOURCE UNITS/PROCEDURE	0.50	1.00
X		
PROCEDURES/YEAR	117.5909	117.5908696
= ANNUAL COST	$943	$353

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$6,300.00
X		
RESOURCE UNITS/YEAR	80.0	1.0
X		
PERCENTAGE UTILIZATION	30%	30%
= ANNUAL COST	$329	$1,890

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	20250.00	1215.00	419.17	395.45
Year 2	16200.00	972.00	335.34	298.45
Year 3	12150.00	729.00	251.50	211.17
Year 4	8100.00	486.00	167.67	132.81
Year 5	4050.00	243.00	83.83	62.65
SUM				$1,100.52

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Periph. Vascular

SPECIALIST, HIGH COST

	BMAD TECH	BREAK EVEN PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$74.58	117.6	10.00%	75.00%	30.00%	$90,000	$4,037	5
HIGH ANN. PROCEDURES	$74.58	117.6	10.00%	75.00%	30.00%	$90,000	$4,037	5
LOW ANN. PROCEDURES	$74.58	117.6	10.00%	75.00%	30.00%	$90,000	$4,037	5
HIGH COST OF CAPITAL	$74.58	120.3	12.50%	75.00%	30.00%	$90,000	$4,037	5
LOW COST OF CAPITAL	$74.58	114.9	7.50%	75.00%	30.00%	$90,000	$4,037	5
LOW % UTILIZATION	$74.58	87.6	10.00%	75.00%	22.50%	$90,000	$4,037	5
HIGH % UTILIZATION	$74.58	148.0	10.00%	75.00%	37.50%	$90,000	$4,037	5
HIGH % CAP. BORROWED	$74.58	107.5	10.00%	93.75%	30.00%	$90,000	$4,037	5
HIGH EQUIP. PRICE	$74.58	145.7	10.00%	75.00%	30.00%	$112,500	$4,037	5
LOW EQUIP. PRICE	$74.58	89.5	10.00%	75.00%	30.00%	$67,500	$4,037	5
HIGH OP. EXPENSES	$74.58	132.0	10.00%	75.00%	30.00%	$90,000	$5,047	5
LOW OP. EXPENSES	$74.58	104.3	10.00%	75.00%	30.00%	$90,000	$3,028	5
LONG USEFUL LIFE	$74.58	96.8	10.00%	75.00%	30.00%	$90,000	$3,028	6
SHORT USEFUL LIFE	$74.58	107.5	10.00%	75.00%	30.00%	$90,000	$3,028	4

6. CHEST X-RAY, ONE VIEW

6. CHEST X-RAY, ONE VIEW
NORMAL-RETURN PRICES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Chest X-Ray, 1	Specialist?	N
CPT-4 Code(s):	71010	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	142	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.33
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	150.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$3.75
Equipment Purchase Price:	$50,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	10%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$13.72	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$1,949	$1,949	$1,949	$1,949	$1,949	$1,949	$1,949
CASH OUTFLOWS								
2 Equip. purchase & salvage	$12,500	$7,635	$7,635	$7,635	$7,635	$7,635	$0	$0
3 x % utilization	$1,250	$764	$764	$764	$764	$764	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$493	$493	$493	$493	$493	$493	$493
6 supplies	$0	$533	$533	$533	$533	$533	$533	$533
7 maintenance	$0	$250	$250	$250	$250	$250	$250	$250
8 overhead	$0	$206	$206	$206	$206	$206	$206	$206
9 Total Expenses/Yr.	$1,250	$2,244	$2,244	$2,244	$2,244	$2,244	$1,481	$1,481
10 Taxes Before Depreciation	$0	($102)	($102)	($102)	($102)	($102)	$161	$161
11 Depreciation Tax Shield	$0	($86)	($86)	($86)	($86)	($350)	$0	$0
12 Net Cash Outflow/Yr.	$1,250	$2,056	$2,056	$2,056	$2,056	$1,793	$1,642	$1,642
13 NET CASH FLOW	($1,250)	($107)	($107)	($107)	($107)	$156	$306	$306
14 DISCOUNTED CASH FLOW	($1,250)	($98)	($89)	($81)	($73)	$97	$173	$157
15 PV of Interest Tax Shield	$203.80	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$3.75
X		
RESOURCE UNITS/PROCEDURE	0.33	1.00
X		
PROCEDURES/YEAR	142	142
= ANNUAL COST	$493	$533

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	150.0	1.0
X		
PERCENTAGE UTILIZATION	10%	10%
= ANNUAL COST	$206	$250

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	3750.00	225.00	77.63	73.23
Year 2	3000.00	180.00	62.10	55.27
Year 3	2250.00	135.00	46.57	39.11
Year 4	1500.00	90.00	31.05	24.59
Year 5	750.00	45.00	15.52	11.60
SUM				$203.80

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Chest X-Ray

NON-SPECILAIST, LOW COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$13.72	142	10.00%	75.00%	10.00%	$50,000	$1,481	10
HIGH ANN. PROCEDURES	$12.42	177.5	10.00%	75.00%	10.00%	$50,000	$1,481	10
LOW ANN. PROCEDURES	$15.89	106.5	10.00%	75.00%	10.00%	$50,000	$1,481	10
HIGH COST OF CAPITAL	$13.87	142	12.50%	75.00%	10.00%	$50,000	$1,481	10
LOW COST OF CAPITAL	$13.58	142	7.50%	75.00%	10.00%	$50,000	$1,481	10
LOW % UTILIZATION	$12.09	142	10.00%	75.00%	7.50%	$50,000	$1,481	10
HIGH % UTILIZATION	$15.36	142	10.00%	75.00%	12.50%	$50,000	$1,481	10
HIGH % CAP. BORROWED	$13.26	142	10.00%	93.75%	10.00%	$50,000	$1,481	10
HIGH EQUIP. PRICE	$14.99	142	10.00%	75.00%	10.00%	$62,500	$1,481	10
LOW EQUIP. PRICE	$12.46	142	10.00%	75.00%	10.00%	$37,500	$1,481	10
HIGH OP. EXPENSES	$16.33	142	10.00%	75.00%	10.00%	$50,000	$1,851	10
LOW OP. EXPENSES	$11.12	142	10.00%	75.00%	10.00%	$50,000	$1,111	10
LONG USEFUL LIFE	$10.90	142	10.00%	75.00%	10.00%	$50,000	$1,111	13
SHORT USEFUL LIFE	$13.23	142	10.00%	75.00%	10.00%	$50,000	$1,111	8

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Chest X-Ray, 1	Specialist?	N
CPT-4 Code(s):	71010	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	142	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.33
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	150.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$5.50
Equipment Purchase Price:	$60,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	10%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$18.60	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$2,641	$2,641	$2,641	$2,641	$2,641	$2,641	$2,641
CASH OUTFLOWS								
2 Equip. purchase & salvage	$15,000	$9,162	$9,162	$9,162	$9,162	$9,162	$0	$0
3 x % utilization	$1,500	$916	$916	$916	$916	$916	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$493	$493	$493	$493	$493	$493	$493
6 supplies	$0	$781	$781	$781	$781	$781	$781	$781
7 maintenance	$0	$600	$600	$600	$600	$600	$600	$600
8 overhead	$0	$206	$206	$206	$206	$206	$206	$206
9 Total Expenses/Yr.	$1,500	$2,996	$2,996	$2,996	$2,996	$2,996	$2,079	$2,079
10 Taxes Before Depreciation	$0	($122)	($122)	($122)	($122)	($122)	$194	$194
11 Depreciation Tax Shield	$0	($103)	($103)	($103)	($103)	($420)	$0	$0
12 Net Cash Outflow/Yr.	$1,500	$2,770	$2,770	$2,770	$2,770	$2,454	$2,273	$2,273
13 NET CASH FLOW	($1,500)	($129)	($129)	($129)	($129)	$187	$368	$368
14 DISCOUNTED CASH FLOW	($1,500)	($117)	($107)	($97)	($88)	$116	$208	$189
15 PV of Interest Tax Shield	$244.56	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$5.50
X		
RESOURCE UNITS/PROCEDURE	0.33	1.00
X		
PROCEDURES/YEAR	142	142
= ANNUAL COST	$493	$781

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	150.0	1.0
X		
PERCENTAGE UTILIZATION	10%	10%
= ANNUAL COST	$206	$600

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	4500.00	270.00	93.15	87.88
Year 2	3600.00	216.00	74.52	66.32
Year 3	2700.00	162.00	55.89	46.93
Year 4	1800.00	108.00	37.26	29.51
Year 5	900.00	54.00	18.63	13.92
SUM				$244.56

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Chest X-Ray , 1	Specialist?	S
CPT-4 Code(s):	71010	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	210	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.33
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	200.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$3.75
Equipment Purchase Price:	$90,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	10%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$16.50	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$3,465	$3,465	$3,465	$3,465	$3,465	$3,465	$3,465
CASH OUTFLOWS								
2 Equip. purchase & salvage	$22,500	$13,743	$13,743	$13,743	$13,743	$13,743	$0	$0
3 x % utilization	$2,250	$1,374	$1,374	$1,374	$1,374	$1,374	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$1,112	$1,112	$1,112	$1,112	$1,112	$1,112	$1,112
6 supplies	$0	$788	$788	$788	$788	$788	$788	$788
7 maintenance	$0	$450	$450	$450	$450	$450	$450	$450
8 overhead	$0	$274	$274	$274	$274	$274	$274	$274
9 Total Expenses/Yr.	$2,250	$3,997	$3,997	$3,997	$3,997	$3,997	$2,623	$2,623
10 Taxes Before Depreciation	$0	($184)	($184)	($184)	($184)	($184)	$290	$290
11 Depreciation Tax Shield	$0	($155)	($155)	($155)	($155)	($629)	$0	$0
12 Net Cash Outflow/Yr.	$2,250	$3,658	$3,658	$3,658	$3,658	$3,184	$2,914	$2,914
13 NET CASH FLOW	($2,250)	($193)	($193)	($193)	($193)	$281	$552	$552
14 DISCOUNTED CASH FLOW	($2,250)	($176)	($160)	($145)	($132)	$174	$311	$283
15 PV of Interest Tax Shield	$366.84	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$3.75
X		
RESOURCE UNITS/PROCEDURE	0.33	1.00
X		
PROCEDURES/YEAR	210	210
= ANNUAL COST	$1,112	$788

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	200.0	1.0
X		
PERCENTAGE UTILIZATION	10%	10%
= ANNUAL COST	$274	$450

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	6750.00	405.00	139.72	131.82
Year 2	5400.00	324.00	111.78	99.48
Year 3	4050.00	243.00	83.83	70.39
Year 4	2700.00	162.00	55.89	44.27
Year 5	1350.00	81.00	27.94	20.88
SUM				$366.84

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Chest X-Ray, 1	Specialist?	S
CPT-4 Code(s):	71010	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	210	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.33
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	200.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$5.50
Equipment Purchase Price	$100,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	10%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$21.32	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$4,476	$4,476	$4,476	$4,476	$4,476	$4,476	$4,476
CASH OUTFLOWS								
2 Equip. purchase & salvage	$25,000	$15,270	$15,270	$15,270	$15,270	$15,270	$0	$0
3 x % utilization	$2,500	$1,527	$1,527	$1,527	$1,527	$1,527	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$1,112	$1,112	$1,112	$1,112	$1,112	$1,112	$1,112
6 supplies	$0	$1,155	$1,155	$1,155	$1,155	$1,155	$1,155	$1,155
7 maintenance	$0	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
8 overhead	$0	$274	$274	$274	$274	$274	$274	$274
9 Total Expenses/Yr.	$2,500	$5,068	$5,068	$5,068	$5,068	$5,068	$3,541	$3,541
10 Taxes Before Depreciation	$0	($204)	($204)	($204)	($204)	($204)	$323	$323
11 Depreciation Tax Shield	$0	($173)	($173)	($173)	($173)	($699)	$0	$0
12 Net Cash Outflow/Yr.	$2,500	$4,691	$4,691	$4,691	$4,691	$4,164	$3,863	$3,863
13 NET CASH FLOW	($2,500)	($215)	($215)	($215)	($215)	$312	$613	$613
14 DISCOUNTED CASH FLOW	($2,500)	($195)	($178)	($161)	($147)	$194	$346	$314
15 PV of Interest Tax Shield	$407.60	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$5.50
X		
RESOURCE UNITS/PROCEDURE	0.33	1.00
X		
PROCEDURES/YEAR	210	210
= ANNUAL COST	$1,112	$1,155

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	#########
X		
RESOURCE UNITS/YEAR	200.0	1.0
X		
PERCENTAGE UTILIZATION	10%	10%
= ANNUAL COST	$274	$1,000

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	7500.00	450.00	155.25	146.46
Year 2	6000.00	360.00	124.20	110.54
Year 3	4500.00	270.00	93.15	78.21
Year 4	3000.00	180.00	62.10	49.19
Year 5	1500.00	90.00	31.05	23.20
SUM				$407.60

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Chest X-Ray, 1

SPECILAIST, HIGH COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$21.32	210	10.00%	75.00%	10.00%	$100,000	$3,541	10
HIGH ANN. PROCEDURES	$19.21	262.5	10.00%	75.00%	10.00%	$100,000	$3,541	10
LOW ANN. PROCEDURES	$24.82	157.5	10.00%	75.00%	10.00%	$100,000	$3,541	10
HIGH COST OF CAPITAL	$21.51	210	12.50%	75.00%	10.00%	$100,000	$3,541	10
LOW COST OF CAPITAL	$21.12	210	7.50%	75.00%	10.00%	$100,000	$3,541	10
LOW % UTILIZATION	$18.67	210	10.00%	75.00%	7.50%	$100,000	$3,541	10
HIGH % UTILIZATION	$23.97	210	10.00%	75.00%	12.50%	$100,000	$3,541	10
HIGH % CAP. BORROWED	$20.68	210	10.00%	93.75%	10.00%	$100,000	$3,541	10
HIGH EQUIP. PRICE	$23.62	210	10.00%	75.00%	10.00%	$125,000	$3,541	10
LOW EQUIP. PRICE	$19.01	210	10.00%	75.00%	10.00%	$75,000	$3,541	10
HIGH OP. EXPENSES	$25.53	210	10.00%	75.00%	10.00%	$100,000	$4,426	10
LOW OP. EXPENSES	$17.10	210	10.00%	75.00%	10.00%	$100,000	$2,655	10
LONG USEFUL LIFE	$16.81	210	10.00%	75.00%	10.00%	$100,000	$2,655	13
SHORT USEFUL LIFE	$19.97	210	10.00%	75.00%	10.00%	$100,000	$2,655	8

6. CHEST X-RAY, ONE VIEW
NORMAL-RETURN VOLUMES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Chest X-Ray ,1	Specialist?	N
CPT-4 Code(s):	71010	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	97.72857	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.33
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	150.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$3.75
Equipment Purchase Price:	$50,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	10%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$16.67	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$1,629	$1,629	$1,629	$1,629	$1,629	$1,629	$1,629
CASH OUTFLOWS								
2 Equip. purchase & salvage	$12,500	$7,635	$7,635	$7,635	$7,635	$7,635	$0	$0
3 x % utilization	$1,250	$764	$764	$764	$764	$764	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$339	$339	$339	$339	$339	$339	$339
6 supplies	$0	$366	$366	$366	$366	$366	$366	$366
7 maintenance	$0	$250	$250	$250	$250	$250	$250	$250
8 overhead	$0	$206	$206	$206	$206	$206	$206	$206
9 Total Expenses/Yr.	$1,250	$1,925	$1,925	$1,925	$1,925	$1,925	$1,161	$1,161
10 Taxes Before Depreciation	$0	($102)	($102)	($102)	($102)	($102)	$161	$161
11 Depreciation Tax Shield	$0	($86)	($86)	($86)	($86)	($350)	$0	$0
12 Net Cash Outflow/Yr.	$1,250	$1,737	$1,737	$1,737	$1,737	$1,473	$1,323	$1,323
13 NET CASH FLOW	($1,250)	($107)	($107)	($107)	($107)	$156	$306	$306
14 DISCOUNTED CASH FLOW	($1,250)	($98)	($89)	($81)	($73)	$97	$173	$157
15 PV of Interest Tax Shield	$203.80	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$3.75
X		
RESOURCE UNITS/PROCEDURE	0.33	1.00
X		
PROCEDURES/YEAR	97.72857	97.72857
= ANNUAL COST	$339	$366

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	#########
X		
RESOURCE UNITS/YEAR	150.0	1.0
X		
PERCENTAGE UTILIZATION	10%	10%
= ANNUAL COST	$206	$250

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	3750.00	225.00	77.63	73.23
Year 2	3000.00	180.00	62.10	55.27
Year 3	2250.00	135.00	46.57	39.11
Year 4	1500.00	90.00	31.05	24.59
Year 5	750.00	45.00	15.52	11.60
SUM				$203.80

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Chest X-Ray .1

NON-SPCIALIST, LOW COST

	BMAD TECH	BREAK EVEN PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$16.67	97.73095	10.00%	75.00%	10.00%	$50,000	$1,647	10
HIGH ANN. PROCEDURES	$16.67	97.72535	10.00%	75.00%	10.00%	$50,000	$1,647	10
LOW ANN. PROCEDURES	$16.67	97.72284	10.00%	75.00%	10.00%	$50,000	$1,647	10
HIGH COST OF CAPITAL	$16.67	99.90063	12.50%	75.00%	10.00%	$50,000	$1,647	10
LOW COST OF CAPITAL	$16.67	95.54182	7.50%	75.00%	10.00%	$50,000	$1,647	10
LOW % UTILIZATION	$16.67	73.16773	10.00%	75.00%	7.50%	$50,000	$1,647	10
HIGH % UTILIZATION	$16.67	122.3608	10.00%	75.00%	12.50%	$50,000	$1,647	10
HIGH % CAP. BORROWED	$16.67	90.68905	10.00%	93.75%	10.00%	$50,000	$1,647	10
HIGH EQUIP. PRICE	$16.67	116.7048	10.00%	75.00%	10.00%	$62,500	$1,647	10
LOW EQUIP. PRICE	$16.67	78.73375	10.00%	75.00%	10.00%	$37,500	$1,647	10
HIGH OP. EXPENSES	$16.67	135.6988	10.00%	75.00%	10.00%	$50,000	$2,059	10
LOW OP. EXPENSES	$16.67	71.92937	10.00%	75.00%	10.00%	$50,000	$1,235	10
LONG USEFUL LIFE	$16.67	69.25203	10.00%	75.00%	10.00%	$50,000	$1,235	12
SHORT USEFUL LIFE	$16.67	98.66573	10.00%	75.00%	10.00%	$50,000	$1,235	8

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Chest X-Ray ,1	Specialist?	N
CPT-4 Code(s):	71010	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	177.5	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.33
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	150.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$5.50
Equipment Purchase Price:	$60,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	10.0%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$16.67	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$2,960	$2,960	$2,960	$2,960	$2,960	$2,960	$2,960
CASH OUTFLOWS								
2 Equip. purchase & salvage	$15,000	$9,162	$9,162	$9,162	$9,162	$9,162	$0	$0
3 x % utilization	$1,500	$916	$916	$916	$916	$916	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$616	$616	$616	$616	$616	$616	$616
6 supplies	$0	$977	$977	$977	$977	$977	$977	$977
7 maintenance	$0	$600	$600	$600	$600	$600	$600	$600
8 overhead	$0	$206	$206	$206	$206	$206	$206	$206
9 Total Expenses/Yr.	$1,500	$3,315	$3,315	$3,315	$3,315	$3,315	$2,398	$2,398
10 Taxes Before Depreciation	$0	($122)	($122)	($122)	($122)	($122)	$194	$194
11 Depreciation Tax Shield	$0	($103)	($103)	($103)	($103)	($420)	$0	$0
12 Net Cash Outflow/Yr.	$1,500	$3,089	$3,089	$3,089	$3,089	$2,773	$2,592	$2,592
13 NET CASH FLOW	($1,500)	($129)	($129)	($129)	($129)	$187	$368	$368
14 DISCOUNTED CASH FLOW	($1,500)	($117)	($107)	($97)	($88)	$116	$208	$189

15 PV of Interest Tax Shield $244.56 [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$5.50
X		
RESOURCE UNITS/PROCEDURE	0.33	1.00
X		
PROCEDURES/YEAR	177.5498	177.5498
= ANNUAL COST	$616	$977

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	#########
X		
RESOURCE UNITS/YEAR	150.0	1.0
X		
PERCENTAGE UTILIZATION	10%	10%
= ANNUAL COST	$206	$600

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	4500.00	270.00	93.15	87.88
Year 2	3600.00	216.00	74.52	66.32
Year 3	2700.00	162.00	55.89	46.93
Year 4	1800.00	108.00	37.26	29.51
Year 5	900.00	54.00	18.63	13.92
SUM				$244.56

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Chest X-Ray, 1	Specialist?	S
CPT-4 Code(s):	71010	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	205.3	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.33
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	200.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$3.75
Equipment Purchase Price:	$90,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	10.0%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$16.67	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$3,423	$3,423	$3,423	$3,423	$3,423	$3,423	$3,423
CASH OUTFLOWS								
2 Equip. purchase & salvage	$22,500	$13,743	$13,743	$13,743	$13,743	$13,743	$0	$0
3 x % utilization	$2,250	$1,374	$1,374	$1,374	$1,374	$1,374	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$1,087	$1,087	$1,087	$1,087	$1,087	$1,087	$1,087
6 supplies	$0	$770	$770	$770	$770	$770	$770	$770
7 maintenance	$0	$450	$450	$450	$450	$450	$450	$450
8 overhead	$0	$274	$274	$274	$274	$274	$274	$274
9 Total Expenses/Yr.	$2,250	$3,955	$3,955	$3,955	$3,955	$3,955	$2,581	$2,581
10 Taxes Before Depreciation	$0	($184)	($184)	($184)	($184)	($184)	$291	$291
11 Depreciation Tax Shield	$0	($155)	($155)	($155)	($155)	($629)	$0	$0
12 Net Cash Outflow/Yr.	$2,250	$3,616	$3,616	$3,616	$3,616	$3,142	$2,871	$2,871
13 NET CASH FLOW	($2,250)	($193)	($193)	($193)	($193)	$281	$552	$552
14 DISCOUNTED CASH FLOW	($2,250)	($176)	($160)	($145)	($132)	$174	$311	$283
15 PV of Interest Tax Shield	$366.84	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$3.75
X		
RESOURCE UNITS/PROCEDURE	0.33	1.00
X		
PROCEDURES/YEAR	205.3386	205.3386
= ANNUAL COST	$1,087	$770

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	#########
X		
RESOURCE UNITS/YEAR	200.0	1.0
X		
PERCENTAGE UTILIZATION	10%	10%
= ANNUAL COST	$274	$450

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	6750.00	405.00	139.72	131.82
Year 2	5400.00	324.00	111.78	99.48
Year 3	4050.00	243.00	83.83	70.39
Year 4	2700.00	162.00	55.89	44.27
Year 5	1350.00	81.00	27.94	20.88
SUM				$366.84

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Chest X-Ray ,1	Specialist?	S
CPT-4 Code(s):	71010	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	376.0	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.33
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	200.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$5.50
Equipment Purchase Price:	$100,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	10%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$16.67	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$6,267	$6,267	$6,267	$6,267	$6,267	$6,267	$6,267
CASH OUTFLOWS								
2 Equip. purchase & salvage	$25,000	$15,270	$15,270	$15,270	$15,270	$15,270	$0	$0
3 x % utilization	$2,500	$1,527	$1,527	$1,527	$1,527	$1,527	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$1,990	$1,990	$1,990	$1,990	$1,990	$1,990	$1,990
6 supplies	$0	$2,068	$2,068	$2,068	$2,068	$2,068	$2,068	$2,068
7 maintenance	$0	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
8 overhead	$0	$274	$274	$274	$274	$274	$274	$274
9 Total Expenses/Yr.	$2,500	$6,859	$6,859	$6,859	$6,859	$6,859	$5,332	$5,332
10 Taxes Before Depreciation	$0	($204)	($204)	($204)	($204)	($204)	$323	$323
11 Depreciation Tax Shield	$0	($173)	($173)	($173)	($173)	($699)	$0	$0
12 Net Cash Outflow/Yr.	$2,500	$6,482	$6,482	$6,482	$6,482	$5,956	$5,655	$5,655
13 NET CASH FLOW	($2,500)	($215)	($215)	($215)	($215)	$312	$613	$613
14 DISCOUNTED CASH FLOW	($2,500)	($195)	($178)	($161)	($147)	$194	$346	$314
15 PV of Interest Tax Shield	$407.60	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$5.50
X		
RESOURCE UNITS/PROCEDURE	0.33	1.00
X		
PROCEDURES/YEAR	375.9714	375.9714
= ANNUAL COST	$1,990	$2,068

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	200.0	1.0
X		
PERCENTAGE UTILIZATION	10%	10%
= ANNUAL COST	$274	$1,000

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	7500.00	450.00	155.25	146.46
Year 2	6000.00	360.00	124.20	110.54
Year 3	4500.00	270.00	93.15	78.21
Year 4	3000.00	180.00	62.10	49.19
Year 5	1500.00	90.00	31.05	23.20
SUM				$407.60

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Chest X-Ray .1

SPECIALIST, HIGH COST

	BMAD TECH	BREAK EVEN PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$16.67	376.0	10.00%	75.00%	10.00%	$100,000	$3,055	10
HIGH ANN. PROCEDURES	$16.67	376.0	10.00%	75.00%	10.00%	$100,000	$3,055	10
LOW ANN. PROCEDURES	$16.67	376.0	10.00%	75.00%	10.00%	$100,000	$3,055	10
HIGH COST OF CAPITAL	$16.67	383.0	12.50%	75.00%	10.00%	$100,000	$3,055	10
LOW COST OF CAPITAL	$16.67	369.0	7.50%	75.00%	10.00%	$100,000	$3,055	10
LOW % UTILIZATION	$16.67	281.6	10.00%	75.00%	7.50%	$100,000	$3,055	10
HIGH % UTILIZATION	$16.67	470.7	10.00%	75.00%	12.50%	$100,000	$3,055	10
HIGH % CAP. BORROWED	$16.67	353.4	10.00%	93.75%	10.00%	$100,000	$3,055	10
HIGH EQUIP. PRICE	$16.67	458.3	10.00%	75.00%	10.00%	$125,000	$3,055	10
LOW EQUIP. PRICE	$16.67	293.7	10.00%	75.00%	10.00%	$75,000	$3,055	10
HIGH OP. EXPENSES	$16.67	795.4	10.00%	75.00%	10.00%	$100,000	$3,819	10
LOW OP. EXPENSES	$16.67	220.5	10.00%	75.00%	10.00%	$100,000	$2,291	10
LONG USEFUL LIFE	$16.67	213.5	10.00%	75.00%	10.00%	$100,000	$2,291	13
SHORT USEFUL LIFE	$16.67	290.7	10.00%	75.00%	10.00%	$100,000	$2,291	8

7. CHEST X-RAY, TWO VIEWS

7. CHEST X-RAY, TWO VIEWS
NORMAL-RETURN PRICES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Chest X-Ray, 2	Specialist?	N
CPT-4 Code(s):	71020	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	283	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	150.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.50
Equipment Purchase Price:	$50,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	10%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$13.18	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$3,730	$3,730	$3,730	$3,730	$3,730	$3,730	$3,730
CASH OUTFLOWS								
2 Equip. purchase & salvage	$12,500	$7,635	$7,635	$7,635	$7,635	$7,635	$0	$0
3 x % utilization	$1,250	$764	$764	$764	$764	$764	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$1,250	$1,250	$1,250	$1,250	$1,250	$1,250	$1,250
6 supplies	$0	$1,557	$1,557	$1,557	$1,557	$1,557	$1,557	$1,557
7 maintenance	$0	$250	$250	$250	$250	$250	$250	$250
8 overhead	$0	$206	$206	$206	$206	$206	$206	$206
9 Total Expenses/Yr.	$1,250	$4,026	$4,026	$4,026	$4,026	$4,026	$3,262	$3,262
10 Taxes Before Depreciation	$0	($102)	($102)	($102)	($102)	($102)	$161	$161
11 Depreciation Tax Shield	$0	($86)	($86)	($86)	($86)	($350)	$0	$0
12 Net Cash Outflow/Yr.	$1,250	$3,838	$3,838	$3,838	$3,838	$3,574	$3,424	$3,424
13 NET CASH FLOW	($1,250)	($107)	($107)	($107)	($107)	$156	$306	$306
14 DISCOUNTED CASH FLOW	($1,250)	($98)	($89)	($81)	($73)	$97	$173	$157
15 PV of Interest Tax Shield	$203.80	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$5.50
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	283	283
= ANNUAL COST	$1,250	$1,557

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	#########
X		
RESOURCE UNITS/YEAR	150.0	1.0
X		
PERCENTAGE UTILIZATION	10%	10%
= ANNUAL COST	$206	$250

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	3750.00	225.00	77.63	73.23
Year 2	3000.00	180.00	62.10	55.27
Year 3	2250.00	135.00	46.57	39.11
Year 4	1500.00	90.00	31.05	24.59
Year 5	750.00	45.00	15.52	11.60
SUM				$203.80

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Chest X-Ray, 2

NON-SPECIALIST, LOW COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$13.18	283	10.00%	75.00%	10.00%	$50,000	$3,262	10
HIGH ANN. PROCEDURES	$12.53	353.75	10.00%	75.00%	10.00%	$50,000	$3,262	10
LOW ANN. PROCEDURES	$14.27	212.25	10.00%	75.00%	10.00%	$50,000	$3,262	10
HIGH COST OF CAPITAL	$13.25	283	12.50%	75.00%	10.00%	$50,000	$3,262	10
LOW COST OF CAPITAL	$13.11	283	7.50%	75.00%	10.00%	$50,000	$3,262	10
LOW % UTILIZATION	$12.36	283	10.00%	75.00%	7.50%	$50,000	$3,262	10
HIGH % UTILIZATION	$14.00	283	10.00%	75.00%	12.50%	$50,000	$3,262	10
HIGH % CAP. BORROWED	$12.95	283	10.00%	93.75%	10.00%	$50,000	$3,262	10
HIGH EQUIP. PRICE	$13.82	283	10.00%	75.00%	10.00%	$62,500	$3,262	10
LOW EQUIP. PRICE	$12.55	283	10.00%	75.00%	10.00%	$37,500	$3,262	10
HIGH OP. EXPENSES	$16.06	283	10.00%	75.00%	10.00%	$50,000	$4,078	10
LOW OP. EXPENSES	$10.30	283	10.00%	75.00%	10.00%	$50,000	$2,447	10
LONG USEFUL LIFE	$10.19	283	10.00%	75.00%	10.00%	$50,000	$2,447	13
SHORT USEFUL LIFE	$11.36	283	10.00%	75.00%	10.00%	$50,000	$2,447	8

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Chest X-Ray, 2	Specialist?	N
CPT-4 Code(s):	71020	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	283	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	150.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$8.00
Equipment Purchase Price:	$60,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	10%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$19.57	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$5,537	$5,537	$5,537	$5,537	$5,537	$5,537	$5,537
CASH OUTFLOWS								
2 Equip. purchase & salvage	$15,000	$9,162	$9,162	$9,162	$9,162	$9,162	$0	$0
3 x % utilization	$1,500	$916	$916	$916	$916	$916	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$1,907	$1,907	$1,907	$1,907	$1,907	$1,907	$1,907
6 supplies	$0	$2,264	$2,264	$2,264	$2,264	$2,264	$2,264	$2,264
7 maintenance	$0	$600	$600	$600	$600	$600	$600	$600
8 overhead	$0	$206	$206	$206	$206	$206	$206	$206
9 Total Expenses/Yr.	$1,500	$5,892	$5,892	$5,892	$5,892	$5,892	$4,976	$4,976
10 Taxes Before Depreciation	$0	($122)	($122)	($122)	($122)	($122)	$194	$194
11 Depreciation Tax Shield	$0	($103)	($103)	($103)	($103)	($420)	$0	$0
12 Net Cash Outflow/Yr.	$1,500	$5,666	$5,666	$5,666	$5,666	$5,350	$5,170	$5,170
13 NET CASH FLOW	($1,500)	($129)	($129)	($129)	($129)	$187	$368	$368
14 DISCOUNTED CASH FLOW	($1,500)	($117)	($107)	($97)	($88)	$116	$208	$189
15 PV of Interest Tax Shield	$244.56	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$8.00
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	283	283
= ANNUAL COST	$1,907	$2,264

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	#########
X		
RESOURCE UNITS/YEAR	150.0	1.0
X		
PERCENTAGE UTILIZATION	10%	10%
= ANNUAL COST	$206	$600

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	4500.00	270.00	93.15	87.88
Year 2	3600.00	216.00	74.52	66.32
Year 3	2700.00	162.00	55.89	46.93
Year 4	1800.00	108.00	37.26	29.51
Year 5	900.00	54.00	18.63	13.92
SUM				$244.56

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Chest X-Ray, 2	Specialist?	S
CPT-4 Code(s):	71020	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	428	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	200.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.50
Equipment Purchase Price:	$90,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	20%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$19.61	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$8,393	$8,393	$8,393	$8,393	$8,393	$8,393	$8,393
CASH OUTFLOWS								
2 Equip. purchase & salvage	$22,500	$13,986	$13,986	$13,986	$13,986	$13,986	$0	$0
3 x % utilization	$4,500	$2,797	$2,797	$2,797	$2,797	$2,797	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$2,883	$2,883	$2,883	$2,883	$2,883	$2,883	$2,883
6 supplies	$0	$2,354	$2,354	$2,354	$2,354	$2,354	$2,354	$2,354
7 maintenance	$0	$900	$900	$900	$900	$900	$900	$900
8 overhead	$0	$548	$548	$548	$548	$548	$548	$548
9 Total Expenses/Yr.	$4,500	$9,483	$9,483	$9,483	$9,483	$9,483	$6,685	$6,685
10 Taxes Before Depreciation	$0	($376)	($376)	($376)	($376)	($376)	$589	$589
11 Depreciation Tax Shield	$0	($311)	($311)	($311)	($311)	($1,276)	$0	$0
12 Net Cash Outflow/Yr.	$4,500	$8,796	$8,796	$8,796	$8,796	$7,831	$7,274	$7,274
13 NET CASH FLOW	($4,500)	($403)	($403)	($403)	($403)	$562	$1,119	$1,119
14 DISCOUNTED CASH FLOW	($4,500)	($366)	($333)	($303)	($275)	$349	$631	$574
15 PV of Interest Tax Shield	$733.68	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$5.50
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	428	428
= ANNUAL COST	$2,883	$2,354

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	200.0	1.0
X		
PERCENTAGE UTILIZATION	20%	20%
= ANNUAL COST	$548	$900

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	13500.00	810.00	279.45	263.63
Year 2	10800.00	648.00	223.56	198.97
Year 3	8100.00	486.00	167.67	140.78
Year 4	5400.00	324.00	111.78	88.54
Year 5	2700.00	162.00	55.89	41.76
SUM				$733.68

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Chest X-Ray, 2	Specialist?	S
CPT-4 Code(s):	71020	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	428	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	200.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$8.00
Equipment Purchase Price	$100,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	20%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$25.12	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$10,753	$10,753	$10,753	$10,753	$10,753	$10,753	$10,753
CASH OUTFLOWS								
2 Equip. purchase & salvage	$25,000	$15,540	$15,540	$15,540	$15,540	$15,540	$0	$0
3 x % utilization	$5,000	$3,108	$3,108	$3,108	$3,108	$3,108	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$2,883	$2,883	$2,883	$2,883	$2,883	$2,883	$2,883
6 supplies	$0	$3,424	$3,424	$3,424	$3,424	$3,424	$3,424	$3,424
7 maintenance	$0	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
8 overhead	$0	$548	$548	$548	$548	$548	$548	$548
9 Total Expenses/Yr.	$5,000	$11,963	$11,963	$11,963	$11,963	$11,963	$8,855	$8,855
10 Taxes Before Depreciation	$0	($418)	($418)	($418)	($418)	($418)	$655	$655
11 Depreciation Tax Shield	$0	($345)	($345)	($345)	($345)	($1,417)	$0	$0
12 Net Cash Outflow/Yr.	$5,000	$11,201	$11,201	$11,201	$11,201	$10,128	$9,510	$9,510
13 NET CASH FLOW	($5,000)	($448)	($448)	($448)	($448)	$624	$1,243	$1,243
14 DISCOUNTED CASH FLOW	($5,000)	($407)	($370)	($337)	($306)	$388	$702	$638
15 PV of Interest Tax Shield	$815.20	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$8.00
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	428	428
= ANNUAL COST	$2,883	$3,424

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	200.0	1.0
X		
PERCENTAGE UTILIZATION	20%	20%
= ANNUAL COST	$548	$2,000

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	15000.00	900.00	310.50	292.92
Year 2	12000.00	720.00	248.40	221.08
Year 3	9000.00	540.00	186.30	156.42
Year 4	6000.00	360.00	124.20	98.38
Year 5	3000.00	180.00	62.10	46.40
SUM				$815.20

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Chest X-Ray, 2

SPECIALIST, HIGH COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$25.12	428	10.00%	75.00%	20.00%	$100,000	$8,855	10
HIGH ANN. PROCEDURES	$23.05	535	10.00%	75.00%	20.00%	$100,000	$8,855	10
LOW ANN. PROCEDURES	$28.59	321	10.00%	75.00%	20.00%	$100,000	$8,855	10
HIGH COST OF CAPITAL	$25.32	428	12.50%	75.00%	20.00%	$100,000	$8,855	10
LOW COST OF CAPITAL	$24.93	428	7.50%	75.00%	20.00%	$100,000	$8,855	10
LOW % UTILIZATION	$22.50	428	10.00%	75.00%	15.00%	$100,000	$8,855	10
HIGH % UTILIZATION	$27.76	428	10.00%	75.00%	25.00%	$100,000	$8,855	10
HIGH % CAP. BORROWED	$24.52	428	10.00%	93.75%	20.00%	$100,000	$8,855	10
HIGH EQUIP. PRICE	$27.40	428	10.00%	75.00%	20.00%	$125,000	$8,855	10
LOW EQUIP. PRICE	$22.85	428	10.00%	75.00%	20.00%	$75,000	$8,855	10
HIGH OP. EXPENSES	$30.30	428	10.00%	75.00%	20.00%	$100,000	$11,069	10
LOW OP. EXPENSES	$19.95	428	10.00%	75.00%	20.00%	$100,000	$6,642	10
LONG USEFUL LIFE	$19.66	428	10.00%	75.00%	20.00%	$100,000	$6,642	13
SHORT USEFUL LIFE	$22.79	428	10.00%	75.00%	20.00%	$100,000	$6,642	8

7. CHEST X-RAY, TWO VIEWS
NORMAL-RETURN VOLUMES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Chest X-Ray,2	Specialist?	N
CPT-4 Code(s):	71020	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	60.8	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	150.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.50
Equipment Purchase Price:	$50,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	10%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$25.11	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$1,526	$1,526	$1,526	$1,526	$1,526	$1,526	$1,526
CASH OUTFLOWS								
2 Equip. purchase & salvage	$12,500	$7,635	$7,635	$7,635	$7,635	$7,635	$0	$0
3 x % utilization	$1,250	$764	$764	$764	$764	$764	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$269	$269	$269	$269	$269	$269	$269
6 supplies	$0	$334	$334	$334	$334	$334	$334	$334
7 maintenance	$0	$250	$250	$250	$250	$250	$250	$250
8 overhead	$0	$206	$206	$206	$206	$206	$206	$206
9 Total Expenses/Yr.	$1,250	$1,822	$1,822	$1,822	$1,822	$1,822	$1,058	$1,058
10 Taxes Before Depreciation	$0	($102)	($102)	($102)	($102)	($102)	$161	$161
11 Depreciation Tax Shield	$0	($86)	($86)	($86)	($86)	($350)	$0	$0
12 Net Cash Outflow/Yr.	$1,250	$1,634	$1,634	$1,634	$1,634	$1,370	$1,220	$1,220
13 NET CASH FLOW	($1,250)	($107)	($107)	($107)	($107)	$156	$306	$306
14 DISCOUNTED CASH FLOW	($1,250)	($98)	($89)	($81)	($73)	$97	$173	$157
15 PV of Interest Tax Shield	$203.80	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$5.50
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	60.78045	60.78045
= ANNUAL COST	$269	$334

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	150.0	1.0
X		
PERCENTAGE UTILIZATION	10%	10%
= ANNUAL COST	$206	$250

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	3750.00	225.00	77.63	73.23
Year 2	3000.00	180.00	62.10	55.27
Year 3	2250.00	135.00	46.57	39.11
Year 4	1500.00	90.00	31.05	24.59
Year 5	750.00	45.00	15.52	11.60
SUM				$203.80

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Chest X-Ray,2

NON-SPECIALIST, LOW COST

	BMAD TECH	BREAK EVEN PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$25.11	60.8	10.00%	75.00%	10.00%	$50,000	$2,092	10
HIGH ANN. PROCEDURES	$25.11	60.8	10.00%	75.00%	10.00%	$50,000	$2,092	10
LOW ANN. PROCEDURES	$25.11	60.8	10.00%	75.00%	10.00%	$50,000	$2,092	10
HIGH COST OF CAPITAL	$25.11	62.1	12.50%	75.00%	10.00%	$50,000	$2,092	10
LOW COST OF CAPITAL	$25.11	59.4	7.50%	75.00%	10.00%	$50,000	$2,092	10
LOW % UTILIZATION	$25.11	45.5	10.00%	75.00%	7.50%	$50,000	$2,092	10
HIGH % UTILIZATION	$25.11	76.1	10.00%	75.00%	12.50%	$50,000	$2,092	10
HIGH % CAP. BORROWED	$25.11	56.4	10.00%	93.75%	10.00%	$50,000	$2,092	10
HIGH EQUIP. PRICE	$25.11	72.6	10.00%	75.00%	10.00%	$62,500	$2,092	10
LOW EQUIP. PRICE	$25.11	49.0	10.00%	75.00%	10.00%	$37,500	$2,092	10
HIGH OP. EXPENSES	$25.11	81.6	10.00%	75.00%	10.00%	$50,000	$2,615	10
LOW OP. EXPENSES	$25.11	45.8	10.00%	75.00%	10.00%	$50,000	$1,569	10
LONG USEFUL LIFE	$25.11	44.1	10.00%	75.00%	10.00%	$50,000	$1,569	13
SHORT USEFUL LIFE	$25.11	62.8	10.00%	75.00%	10.00%	$50,000	$1,569	8

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Chest X-Ray,2	Specialist?	N
CPT-4 Code(s):	71020	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	131.8	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	150.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$8.00
Equipment Purchase Price:	$60,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	10.0%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$25.11	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$3,309	$3,309	$3,309	$3,309	$3,309	$3,309	$3,309
CASH OUTFLOWS								
2 Equip. purchase & salvage	$15,000	$9,162	$9,162	$9,162	$9,162	$9,162	$0	$0
3 x % utilization	$1,500	$916	$916	$916	$916	$916	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$888	$888	$888	$888	$888	$888	$888
6 supplies	$0	$1,054	$1,054	$1,054	$1,054	$1,054	$1,054	$1,054
7 maintenance	$0	$600	$600	$600	$600	$600	$600	$600
8 overhead	$0	$206	$206	$206	$206	$206	$206	$206
9 Total Expenses/Yr.	$1,500	$3,664	$3,664	$3,664	$3,664	$3,664	$2,747	$2,747
10 Taxes Before Depreciation	$0	($122)	($122)	($122)	($122)	($122)	$194	$194
11 Depreciation Tax Shield	$0	($103)	($103)	($103)	($103)	($420)	$0	$0
12 Net Cash Outflow/Yr.	$1,500	$3,438	$3,438	$3,438	$3,438	$3,122	$2,941	$2,941
13 NET CASH FLOW	($1,500)	($129)	($129)	($129)	($129)	$187	$368	$368
14 DISCOUNTED CASH FLOW	($1,500)	($117)	($107)	($97)	($88)	$116	$208	$189
15 PV of Interest Tax Shield	$244.56	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$5.50
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	177.6143	177.6143
= ANNUAL COST	$1,197	$977

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	200.0	1.0
X		
PERCENTAGE UTILIZATION	20%	20%
= ANNUAL COST	$548	$600

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	9000.00	540.00	186.30	175.75
Year 2	7200.00	432.00	149.04	132.65
Year 3	5400.00	324.00	111.78	93.85
Year 4	3600.00	216.00	74.52	59.03
Year 5	1800.00	108.00	37.26	27.84
SUM				$489.12

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Chest X-Ray,2	Specialist?	S
CPT-4 Code(s):	71020	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	177.6	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	200.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.50
Equipment Purchase Price:	$60,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	20.0%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$25.11	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$4,460	$4,460	$4,460	$4,460	$4,460	$4,460	$4,460
CASH OUTFLOWS								
2 Equip. purchase & salvage	$15,000	$9,324	$9,324	$9,324	$9,324	$9,324	$0	$0
3 x % utilization	$3,000	$1,865	$1,865	$1,865	$1,865	$1,865	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$1,197	$1,197	$1,197	$1,197	$1,197	$1,197	$1,197
6 supplies	$0	$977	$977	$977	$977	$977	$977	$977
7 maintenance	$0	$600	$600	$600	$600	$600	$600	$600
8 overhead	$0	$548	$548	$548	$548	$548	$548	$548
9 Total Expenses/Yr.	$3,000	$5,186	$5,186	$5,186	$5,186	$5,186	$3,321	$3,321
10 Taxes Before Depreciation	$0	($251)	($251)	($251)	($251)	($251)	$393	$393
11 Depreciation Tax Shield	$0	($207)	($207)	($207)	($207)	($850)	$0	$0
12 Net Cash Outflow/Yr.	$3,000	$4,729	$4,729	$4,729	$4,729	$4,085	$3,714	$3,714
13 NET CASH FLOW	($3,000)	($269)	($269)	($269)	($269)	$375	$746	$746
14 DISCOUNTED CASH FLOW	($3,000)	($244)	($222)	($202)	($184)	$233	$421	$383
15 PV of Interest Tax Shield	$489.12	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$8.00
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	131.7746	131.7746
= ANNUAL COST	$888	$1,054

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	#########
X		
RESOURCE UNITS/YEAR	150.0	1.0
X		
PERCENTAGE UTILIZATION	10%	10%
= ANNUAL COST	$206	$600

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	4500.00	270.00	93.15	87.88
Year 2	3600.00	216.00	74.52	66.32
Year 3	2700.00	162.00	55.89	46.93
Year 4	1800.00	108.00	37.26	29.51
Year 5	900.00	54.00	18.63	13.92
SUM				$244.56

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Chest X-Ray,2	Specialist?	S
CPT-4 Code(s):	71020	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	428.5	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	200.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$8.00
Equipment Purchase Price	$100,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	20%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$25.11	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$10,761	$10,761	$10,761	$10,761	$10,761	$10,761	$10,761
CASH OUTFLOWS								
2 Equip. purchase & salvage	$25,000	$15,540	$15,540	$15,540	$15,540	$15,540	$0	$0
3 x % utilization	$5,000	$3,108	$3,108	$3,108	$3,108	$3,108	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$2,887	$2,887	$2,887	$2,887	$2,887	$2,887	$2,887
6 supplies	$0	$3,428	$3,428	$3,428	$3,428	$3,428	$3,428	$3,428
7 maintenance	$0	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
8 overhead	$0	$548	$548	$548	$548	$548	$548	$548
9 Total Expenses/Yr.	$5,000	$11,971	$11,971	$11,971	$11,971	$11,971	$8,863	$8,863
10 Taxes Before Depreciation	$0	($418)	($418)	($418)	($418)	($418)	$655	$655
11 Depreciation Tax Shield	$0	($345)	($345)	($345)	($345)	($1,417)	$0	$0
12 Net Cash Outflow/Yr.	$5,000	$11,209	$11,209	$11,209	$11,209	$10,137	$9,518	$9,518
13 NET CASH FLOW	($5,000)	($448)	($448)	($448)	($448)	$624	$1,243	$1,243
14 DISCOUNTED CASH FLOW	($5,000)	($407)	($370)	($337)	($306)	$388	$702	$638
15 PV of Interest Tax Shield	$815.20	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$8.00
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	428.5497	428.5497
= ANNUAL COST	$2,887	$3,428

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	200.0	1.0
X		
PERCENTAGE UTILIZATION	20%	20%
= ANNUAL COST	$548	$2,000

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	15000.00	900.00	310.50	292.92
Year 2	12000.00	720.00	248.40	221.08
Year 3	9000.00	540.00	186.30	156.42
Year 4	6000.00	360.00	124.20	98.38
Year 5	3000.00	180.00	62.10	46.40
SUM				$815.20

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Chest X-Ray.2

SPECIALIST, HIGH COST

	BMAD TECH	BREAK EVEN PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$25.11	428.5	10.00%	75.00%	20.00%	$100,000	$4,980	10
HIGH ANN. PROCEDURES	$25.11	428.6	10.00%	75.00%	20.00%	$100,000	$4,980	10
LOW ANN. PROCEDURES	$25.11	428.6	10.00%	75.00%	20.00%	$100,000	$4,980	10
HIGH COST OF CAPITAL	$25.11	436.6	12.50%	75.00%	20.00%	$100,000	$4,980	10
LOW COST OF CAPITAL	$25.11	420.5	7.50%	75.00%	20.00%	$100,000	$4,980	10
LOW % UTILIZATION	$25.11	320.5	10.00%	75.00%	15.00%	$100,000	$4,980	10
HIGH % UTILIZATION	$25.11	537.3	10.00%	75.00%	25.00%	$100,000	$4,980	10
HIGH % CAP. BORROWED	$25.11	403.5	10.00%	93.75%	20.00%	$100,000	$4,980	10
HIGH EQUIP. PRICE	$25.11	522.5	10.00%	75.00%	20.00%	$125,000	$4,980	10
LOW EQUIP. PRICE	$25.11	334.6	10.00%	75.00%	20.00%	$75,000	$4,980	10
HIGH OP. EXPENSES	$25.11	759.8	10.00%	75.00%	20.00%	$100,000	$6,225	10
LOW OP. EXPENSES	$25.11	270.9	10.00%	75.00%	20.00%	$100,000	$3,735	10
LONG USEFUL LIFE	$25.11	262.0	10.00%	75.00%	20.00%	$100,000	$3,735	13
SHORT USEFUL LIFE	$25.11	557.4	10.00%	75.00%	20.00%	$100,000	$3,735	8

8. PELVIS X-RAY

8. PELVIS X-RAY
NORMAL-RETURN PRICES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Pelvis X-Ray	Specialist?	N
CPT-4 Code(s):	72170	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	8	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.33
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	150.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$3.75
Equipment Purchase Price:	$50,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	4%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$58.97	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$472	$472	$472	$472	$472	$472	$472
CASH OUTFLOWS								
2 Equip. purchase & salvage	$12,500	$7,561	$7,561	$7,561	$7,561	$7,561	$0	$0
3 x % utilization	$563	$340	$340	$340	$340	$340	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$28	$28	$28	$28	$28	$28	$28
6 supplies	$0	$30	$30	$30	$30	$30	$30	$30
7 maintenance	$0	$113	$113	$113	$113	$113	$113	$113
8 overhead	$0	$92	$92	$92	$92	$92	$92	$92
9 Total Expenses/Yr.	$563	$603	$603	$603	$603	$603	$263	$263
10 Taxes Before Depreciation	$0	($45)	($45)	($45)	($45)	($45)	$72	$72
11 Depreciation Tax Shield	$0	($39)	($39)	($39)	($39)	($156)	$0	$0
12 Net Cash Outflow/Yr.	$563	$519	$519	$519	$519	$402	$335	$335
13 NET CASH FLOW	($563)	($47)	($47)	($47)	($47)	$70	$137	$137
14 DISCOUNTED CASH FLOW	($563)	($43)	($39)	($35)	($32)	$44	$77	$70
15 PV of Interest Tax Shield	$91.71	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$3.75
X		
RESOURCE UNITS/PROCEDURE	0.33	1.00
X		
PROCEDURES/YEAR	8	8
= ANNUAL COST	$28	$30

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	150.0	1.0
X		
PERCENTAGE UTILIZATION	4%	4%
= ANNUAL COST	$92	$113

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	1687.50	101.25	34.93	32.95
Year 2	1350.00	81.00	27.94	24.87
Year 3	1012.50	60.75	20.96	17.60
Year 4	675.00	40.50	13.97	11.07
Year 5	337.50	20.25	6.99	5.22
SUM				$91.71

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Pelvis X-Ray

NON-SPECIALIST, LOW COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$58.94	8	10.00%	75.00%	4.50%	$50,000	$263	10
HIGH ANN. PROCEDURES	$48.62	10	10.00%	75.00%	4.50%	$50,000	$263	10
LOW ANN. PROCEDURES	$76.18	6	10.00%	75.00%	4.50%	$50,000	$263	10
HIGH COST OF CAPITAL	$60.12	8	12.50%	75.00%	4.50%	$50,000	$263	10
LOW COST OF CAPITAL	$57.80	8	7.50%	75.00%	4.50%	$50,000	$263	10
LOW % UTILIZATION	$46.00	8	10.00%	75.00%	3.38%	$50,000	$263	10
HIGH % UTILIZATION	$71.93	8	10.00%	75.00%	5.62%	$50,000	$263	10
HIGH % CAP. BORROWED	$55.17	8	10.00%	93.75%	4.50%	$50,000	$263	10
HIGH EQUIP. PRICE	$68.98	8	10.00%	75.00%	4.50%	$62,500	$263	10
LOW EQUIP. PRICE	$48.92	8	10.00%	75.00%	4.50%	$37,500	$263	10
HIGH OP. EXPENSES	$67.15	8	10.00%	75.00%	4.50%	$50,000	$328	10
LOW OP. EXPENSES	$50.75	8	10.00%	75.00%	4.50%	$50,000	$197	10
LONG USEFUL LIFE	$49.09	8	10.00%	75.00%	4.50%	$50,000	$197	12
SHORT USEFUL LIFE	$67.56	8	10.00%	75.00%	4.50%	$50,000	$197	8

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Pelvis X-Ray	Specialist?	N
CPT-4 Code(s):	72170	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	8	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.33
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	150.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$5.50
Equipment Purchase Price:	$60,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	4%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$85.62	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$685	$685	$685	$685	$685	$685	$685
CASH OUTFLOWS								
2 Equip. purchase & salvage	$15,000	$9,073	$9,073	$9,073	$9,073	$9,073	$0	$0
3 x % utilization	$675	$408	$408	$408	$408	$408	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$28	$28	$28	$28	$28	$28	$28
6 supplies	$0	$44	$44	$44	$44	$44	$44	$44
7 maintenance	$0	$270	$270	$270	$270	$270	$270	$270
8 overhead	$0	$92	$92	$92	$92	$92	$92	$92
9 Total Expenses/Yr.	$675	$843	$843	$843	$843	$843	$434	$434
10 Taxes Before Depreciation	$0	($54)	($54)	($54)	($54)	($54)	$87	$87
11 Depreciation Tax Shield	$0	($47)	($47)	($47)	($47)	($187)	$0	$0
12 Net Cash Outflow/Yr.	$675	$742	$742	$742	$742	$601	$521	$521
13 NET CASH FLOW	($675)	($57)	($57)	($57)	($57)	$84	$164	$164
14 DISCOUNTED CASH FLOW	($675)	($51)	($47)	($43)	($39)	$52	$93	$84
15 PV of Interest Tax Shield	$110.05	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$5.50
X		
RESOURCE UNITS/PROCEDURE	0.33	1.00
X		
PROCEDURES/YEAR	8	8
= ANNUAL COST	$28	$44

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	150.0	1.0
X		
PERCENTAGE UTILIZATION	4%	4%
= ANNUAL COST	$92	$270

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	2025.00	121.50	41.92	39.54
Year 2	1620.00	97.20	33.53	29.85
Year 3	1215.00	72.90	25.15	21.12
Year 4	810.00	48.60	16.77	13.28
Year 5	405.00	24.30	8.38	6.26
SUM				$110.05

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Pelvis X-Ray	Specialist?	S
CPT-4 Code(s):	72170	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	71	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	200.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$3.75
Equipment Purchase Price:	$90,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	4.5%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$20.37	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$1,446	$1,446	$1,446	$1,446	$1,446	$1,446	$1,446
CASH OUTFLOWS								
2 Equip. purchase & salvage	$22,500	$13,609	$13,609	$13,609	$13,609	$13,609	$0	$0
3 x % utilization	$1,013	$612	$612	$612	$612	$612	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$478	$478	$478	$478	$478	$478	$478
6 supplies	$0	$266	$266	$266	$266	$266	$266	$266
7 maintenance	$0	$203	$203	$203	$203	$203	$203	$203
8 overhead	$0	$123	$123	$123	$123	$123	$123	$123
9 Total Expenses/Yr.	$1,013	$1,683	$1,683	$1,683	$1,683	$1,683	$1,070	$1,070
10 Taxes Before Depreciation	$0	($82)	($82)	($82)	($82)	($82)	$130	$130
11 Depreciation Tax Shield	$0	($70)	($70)	($70)	($70)	($281)	$0	$0
12 Net Cash Outflow/Yr.	$1,013	$1,531	$1,531	$1,531	$1,531	$1,320	$1,200	$1,200
13 NET CASH FLOW	($1,013)	($85)	($85)	($85)	($85)	$126	$246	$246
14 DISCOUNTED CASH FLOW	($1,013)	($77)	($70)	($64)	($58)	$78	$139	$126

15 PV of Interest Tax Shield $165.08 [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$3.75
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	71	71
= ANNUAL COST	$478	$266

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	200.0	1.0
X		
PERCENTAGE UTILIZATION	4%	4%
= ANNUAL COST	$123	$203

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	3037.50	182.25	62.88	59.32
Year 2	2430.00	145.80	50.30	44.77
Year 3	1822.50	109.35	37.73	31.68
Year 4	1215.00	72.90	25.15	19.92
Year 5	607.50	36.45	12.58	9.40
SUM				$165.08

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Pelvis X-Ray	Specialist?	S
CPT-4 Code(s):	72170	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	71	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	200.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$5.50
Equipment Purchase Price	$100,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	4%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$26.19	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$1,860	$1,860	$1,860	$1,860	$1,860	$1,860	$1,860
CASH OUTFLOWS								
2 Equip. purchase & salvage	$25,000	$15,122	$15,122	$15,122	$15,122	$15,122	$0	$0
3 x % utilization	$1,125	$680	$680	$680	$680	$680	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$478	$478	$478	$478	$478	$478	$478
6 supplies	$0	$391	$391	$391	$391	$391	$391	$391
7 maintenance	$0	$450	$450	$450	$450	$450	$450	$450
8 overhead	$0	$123	$123	$123	$123	$123	$123	$123
9 Total Expenses/Yr.	$1,125	$2,123	$2,123	$2,123	$2,123	$2,123	$1,442	$1,442
10 Taxes Before Depreciation	$0	($91)	($91)	($91)	($91)	($91)	$144	$144
11 Depreciation Tax Shield	$0	($78)	($78)	($78)	($78)	($312)	$0	$0
12 Net Cash Outflow/Yr.	$1,125	$1,954	$1,954	$1,954	$1,954	$1,720	$1,586	$1,586
13 NET CASH FLOW	($1,125)	($95)	($95)	($95)	($95)	$140	$274	$274
14 DISCOUNTED CASH FLOW	($1,125)	($86)	($78)	($71)	($65)	$87	$154	$140
15 PV of Interest Tax Shield	$183.42	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$5.50
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	71	71
= ANNUAL COST	$478	$391

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	200.0	1.0
X		
PERCENTAGE UTILIZATION	4%	4%
= ANNUAL COST	$123	$450

Present Value of Interest Tax Shield
(Line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	3375.00	202.50	69.86	65.91
Year 2	2700.00	162.00	55.89	49.74
Year 3	2025.00	121.50	41.92	35.19
Year 4	1350.00	81.00	27.94	22.14
Year 5	675.00	40.50	13.97	10.44
SUM				$183.42

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Pelvis X-Ray

SPECIALIST, HIGH COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$26.19	71	10.00%	75.00%	4.50%	$100,000	$1,442	10
HIGH ANN. PROCEDURES	$23.40	88.75	10.00%	75.00%	4.50%	$100,000	$1,442	10
LOW ANN. PROCEDURES	$30.85	53.25	10.00%	75.00%	4.50%	$100,000	$1,442	10
HIGH COST OF CAPITAL	$26.46	71	12.50%	75.00%	4.50%	$100,000	$1,442	10
LOW COST OF CAPITAL	$25.94	71	7.50%	75.00%	4.50%	$100,000	$1,442	10
LOW % UTILIZATION	$22.70	71	10.00%	75.00%	3.38%	$100,000	$1,442	10
HIGH % UTILIZATION	$29.70	71	10.00%	75.00%	5.62%	$100,000	$1,442	10
HIGH % CAP. BORROWED	$25.34	71	10.00%	93.75%	4.50%	$100,000	$1,442	10
HIGH EQUIP. PRICE	$29.25	71	10.00%	75.00%	4.50%	$125,000	$1,442	10
LOW EQUIP. PRICE	$23.14	71	10.00%	75.00%	4.50%	$75,000	$1,442	10
HIGH OP. EXPENSES	$31.27	71	10.00%	75.00%	4.50%	$100,000	$1,803	10
LOW OP. EXPENSES	$21.12	71	10.00%	75.00%	4.50%	$100,000	$1,082	10
LONG USEFUL LIFE	$20.74	71	10.00%	75.00%	4.50%	$100,000	$1,082	13
SHORT USEFUL LIFE	$24.91	71	10.00%	75.00%	4.50%	$100,000	$1,082	8

8. PELVIS X-RAY
NORMAL-RETURN VOLUMES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Pelvis X-Ray	Specialist?	N
CPT-4 Code(s):	72170	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	31.1	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.33
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	150.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$3.75
Equipment Purchase Price:	$50,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	4%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$20.53	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$639	$639	$639	$639	$639	$639	$639
CASH OUTFLOWS								
2 Equip. purchase & salvage	$12,500	$7,561	$7,561	$7,561	$7,561	$7,561	$0	$0
3 x % utilization	$563	$340	$340	$340	$340	$340	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$108	$108	$108	$108	$108	$108	$108
6 supplies	$0	$117	$117	$117	$117	$117	$117	$117
7 maintenance	$0	$113	$113	$113	$113	$113	$113	$113
8 overhead	$0	$92	$92	$92	$92	$92	$92	$92
9 Total Expenses/Yr.	$563	$770	$770	$770	$770	$770	$430	$430
10 Taxes Before Depreciation	$0	($45)	($45)	($45)	($45)	($45)	$72	$72
11 Depreciation Tax Shield	$0	($39)	($39)	($39)	($39)	($156)	$0	$0
12 Net Cash Outflow/Yr.	$563	$686	$686	$686	$686	$568	$502	$502
13 NET CASH FLOW	($563)	($47)	($47)	($47)	($47)	$70	$137	$137
14 DISCOUNTED CASH FLOW	($563)	($43)	($39)	($35)	($32)	$44	$77	$70
15 PV of Interest Tax Shield	$91.71	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$3.75
X		
RESOURCE UNITS/PROCEDURE	0.33	1.00
X		
PROCEDURES/YEAR	31.10231	31.10231
= ANNUAL COST	$108	$117

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	150.0	1.0
X		
PERCENTAGE UTILIZATION	4%	4%
= ANNUAL COST	$92	$113

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	1687.50	101.25	34.93	32.95
Year 2	1350.00	81.00	27.94	24.87
Year 3	1012.50	60.75	20.96	17.60
Year 4	675.00	40.50	13.97	11.07
Year 5	337.50	20.25	6.99	5.22
SUM				$91.71

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Pelvis X-Ray

NON-SPECIALIST, LOW COST

	BMAD TECH	BREAK EVEN PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$20.53	31.1	10.00%	75.00%	4.50%	$50,000	$1,397	10
HIGH ANN. PROCEDURES	$20.53	31.1	10.00%	75.00%	4.50%	$50,000	$1,397	10
LOW ANN. PROCEDURES	$20.53	31.1	10.00%	75.00%	4.50%	$50,000	$1,397	10
HIGH COST OF CAPITAL	$20.53	31.8	12.50%	75.00%	4.50%	$50,000	$1,397	10
LOW COST OF CAPITAL	$20.53	30.4	7.50%	75.00%	4.50%	$50,000	$1,397	10
LOW % UTILIZATION	$20.53	23.3	10.00%	75.00%	3.38%	$50,000	$1,397	10
HIGH % UTILIZATION	$20.53	38.9	10.00%	75.00%	5.62%	$50,000	$1,397	10
HIGH % CAP. BORROWED	$20.53	28.8	10.00%	93.75%	4.50%	$50,000	$1,397	10
HIGH EQUIP. PRICE	$20.53	37.1	10.00%	75.00%	4.50%	$62,500	$1,397	10
LOW EQUIP. PRICE	$20.53	25.1	10.00%	75.00%	4.50%	$37,500	$1,397	10
HIGH OP. EXPENSES	$20.53	40.4	10.00%	75.00%	4.50%	$50,000	$1,746	10
LOW OP. EXPENSES	$20.53	24.0	10.00%	75.00%	4.50%	$50,000	$1,048	10
LONG USEFUL LIFE	$20.53	23.1	10.00%	75.00%	4.50%	$50,000	$1,048	12
SHORT USEFUL LIFE	$20.53	32.9	10.00%	75.00%	4.50%	$50,000	$1,048	8

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Pelvis X-Ray	Specialist?	N
CPT-4 Code(s):	72170	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	53.0	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.33
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	150.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$5.50
Equipment Purchase Price:	$60,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	4.5%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$20.53	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$1,089	$1,089	$1,089	$1,089	$1,089	$1,089	$1,089
CASH OUTFLOWS								
2 Equip. purchase & salvage	$15,000	$9,073	$9,073	$9,073	$9,073	$9,073	$0	$0
3 x % utilization	$675	$408	$408	$408	$408	$408	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$184	$184	$184	$184	$184	$184	$184
6 supplies	$0	$292	$292	$292	$292	$292	$292	$292
7 maintenance	$0	$270	$270	$270	$270	$270	$270	$270
8 overhead	$0	$92	$92	$92	$92	$92	$92	$92
9 Total Expenses/Yr.	$675	$1,247	$1,247	$1,247	$1,247	$1,247	$838	$838
10 Taxes Before Depreciation	$0	($54)	($54)	($54)	($54)	($54)	$86	$86
11 Depreciation Tax Shield	$0	($47)	($47)	($47)	($47)	($187)	$0	$0
12 Net Cash Outflow/Yr.	$675	$1,146	$1,146	$1,146	$1,146	$1,005	$925	$925
13 NET CASH FLOW	($675)	($57)	($57)	($57)	($57)	$84	$164	$164
14 DISCOUNTED CASH FLOW	($675)	($52)	($47)	($43)	($39)	$52	$93	$84
15 PV of Interest Tax Shield	$110.05	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$5.50
X		
RESOURCE UNITS/PROCEDURE	0.33	1.00
X		
PROCEDURES/YEAR	53.04118	53.04118
= ANNUAL COST	$184	$292

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	150.0	1.0
X		
PERCENTAGE UTILIZATION	4%	4%
= ANNUAL COST	$92	$270

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	2025.00	121.50	41.92	39.54
Year 2	1620.00	97.20	33.53	29.85
Year 3	1215.00	72.90	25.15	21.12
Year 4	810.00	48.60	16.77	13.28
Year 5	405.00	24.30	8.38	6.26
SUM				$110.05

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Pelvis X-Ray	Specialist?	S
CPT-4 Code(s):	72170	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	69.9	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	200.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$3.75
Equipment Purchase Price:	$90,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	4.5%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$20.53	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$1,434	$1,434	$1,434	$1,434	$1,434	$1,434	$1,434
CASH OUTFLOWS								
2 Equip. purchase & salvage	$22,500	$13,609	$13,609	$13,609	$13,609	$13,609	$0	$0
3 x % utilization	$1,013	$612	$612	$612	$612	$612	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$471	$471	$471	$471	$471	$471	$471
6 supplies	$0	$262	$262	$262	$262	$262	$262	$262
7 maintenance	$0	$203	$203	$203	$203	$203	$203	$203
8 overhead	$0	$123	$123	$123	$123	$123	$123	$123
9 Total Expenses/Yr.	$1,013	$1,671	$1,671	$1,671	$1,671	$1,671	$1,059	$1,059
10 Taxes Before Depreciation	$0	($82)	($82)	($82)	($82)	($82)	$130	$130
11 Depreciation Tax Shield	$0	($70)	($70)	($70)	($70)	($281)	$0	$0
12 Net Cash Outflow/Yr.	$1,013	$1,519	$1,519	$1,519	$1,519	$1,308	$1,188	$1,188
13 NET CASH FLOW	($1,013)	($85)	($85)	($85)	($85)	$126	$246	$246
14 DISCOUNTED CASH FLOW	($1,013)	($77)	($70)	($64)	($58)	$78	$139	$126
15 PV of Interest Tax Shield	$165.08	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$3.75
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	69.87152	69.87152
= ANNUAL COST	$471	$262

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	#########
X		
RESOURCE UNITS/YEAR	200.0	1.0
X		
PERCENTAGE UTILIZATION	4%	4%
= ANNUAL COST	$123	$203

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	3037.50	182.25	62.88	59.32
Year 2	2430.00	145.80	50.30	44.77
Year 3	1822.50	109.35	37.73	31.68
Year 4	1215.00	72.90	25.15	19.92
Year 5	607.50	36.45	12.58	9.40
SUM				$165.08

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Pelvis X-Ray	Specialist?	S
CPT-4 Code(s):	72170	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	119.5	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	200.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$5.50
Equipment Purchase Price	$100,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	4%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$20.53	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$2,453	$2,453	$2,453	$2,453	$2,453	$2,453	$2,453
CASH OUTFLOWS								
2 Equip. purchase & salvage	$25,000	$15,122	$15,122	$15,122	$15,122	$15,122	$0	$0
3 x % utilization	$1,125	$680	$680	$680	$680	$680	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$805	$805	$805	$805	$805	$805	$805
6 supplies	$0	$657	$657	$657	$657	$657	$657	$657
7 maintenance	$0	$450	$450	$450	$450	$450	$450	$450
8 overhead	$0	$123	$123	$123	$123	$123	$123	$123
9 Total Expenses/Yr.	$1,125	$2,716	$2,716	$2,716	$2,716	$2,716	$2,036	$2,036
10 Taxes Before Depreciation	$0	($91)	($91)	($91)	($91)	($91)	$144	$144
11 Depreciation Tax Shield	$0	($78)	($78)	($78)	($78)	($312)	$0	$0
12 Net Cash Outflow/Yr.	$1,125	$2,548	$2,548	$2,548	$2,548	$2,313	$2,180	$2,180
13 NET CASH FLOW	($1,125)	($94)	($94)	($94)	($94)	$140	$274	$274
14 DISCOUNTED CASH FLOW	($1,125)	($86)	($78)	($71)	($65)	$87	$154	$140
15 PV of Interest Tax Shield	$183.42	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$5.50
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	119.4966	119.4966
= ANNUAL COST	$805	$657

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	200.0	1.0
X		
PERCENTAGE UTILIZATION	4%	4%
= ANNUAL COST	$123	$450

Present Value of Interest Tax Shield
(Line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	3375.00	202.50	69.86	65.91
Year 2	2700.00	162.00	55.89	49.74
Year 3	2025.00	121.50	41.92	35.19
Year 4	1350.00	81.00	27.94	22.14
Year 5	675.00	40.50	13.97	10.44
SUM				$183.42

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Pelvis X-Ray

SPECIALIST, HIGH COST

	BMAD TECH	BREAK EVEN PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$20.53	119.5	10.00%	75.00%	4.50%	$100,000	$2,593	10
HIGH ANN. PROCEDURES	$20.53	119.5	10.00%	75.00%	4.50%	$100,000	$2,593	10
LOW ANN. PROCEDURES	$20.53	119.5	10.00%	75.00%	4.50%	$100,000	$2,593	10
HIGH COST OF CAPITAL	$20.53	121.7	12.50%	75.00%	4.50%	$100,000	$2,593	10
LOW COST OF CAPITAL	$20.53	117.3	7.50%	75.00%	4.50%	$100,000	$2,593	10
LOW % UTILIZATION	$20.53	89.6	10.00%	75.00%	3.38%	$100,000	$2,593	10
HIGH % UTILIZATION	$20.53	149.5	10.00%	75.00%	5.62%	$100,000	$2,593	10
HIGH % CAP. BORROWED	$20.53	112.2	10.00%	93.75%	4.50%	$100,000	$2,593	10
HIGH EQUIP. PRICE	$20.53	145.7	10.00%	75.00%	4.50%	$125,000	$2,593	10
LOW EQUIP. PRICE	$20.53	93.4	10.00%	75.00%	4.50%	$75,000	$2,593	10
HIGH OP. EXPENSES	$20.53	216.7	10.00%	75.00%	4.50%	$100,000	$3,241	10
LOW OP. EXPENSES	$20.53	74.7	10.00%	75.00%	4.50%	$100,000	$1,945	10
LONG USEFUL LIFE	$20.53	72.3	10.00%	75.00%	4.50%	$100,000	$1,945	13
SHORT USEFUL LIFE	$20.53	98.4	10.00%	75.00%	4.50%	$100,000	$1,945	8

9. HIP X-RAY

9. HIP X-RAY
NORMAL-RETURN PRICES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Technology: Hip X-R	Specialist?	N
CPT-4 Code(s):	73510	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	25	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	150.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.50
Equipment Purchase Price:	$50,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	15%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$65.89	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$1,647	$1,647	$1,647	$1,647	$1,647	$1,647	$1,647
CASH OUTFLOWS								
2 Equip. purchase & salvage	$12,500	$7,704	$7,704	$7,704	$7,704	$7,704	$0	$0
3 x % utilization	$1,888	$1,163	$1,163	$1,163	$1,163	$1,163	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$110	$110	$110	$110	$110	$110	$110
6 supplies	$0	$138	$138	$138	$138	$138	$138	$138
7 maintenance	$0	$378	$378	$378	$378	$378	$378	$378
8 overhead	$0	$310	$310	$310	$310	$310	$310	$310
9 Total Expenses/Yr.	$1,888	$2,099	$2,099	$2,099	$2,099	$2,099	$936	$936
10 Taxes Before Depreciation	$0	($156)	($156)	($156)	($156)	($156)	$245	$245
11 Depreciation Tax Shield	$0	($130)	($130)	($130)	($130)	($532)	$0	$0
12 Net Cash Outflow/Yr.	$1,888	$1,813	$1,813	$1,813	$1,813	$1,412	$1,181	$1,181
13 NET CASH FLOW	($1,888)	($166)	($166)	($166)	($166)	$236	$466	$466
14 DISCOUNTED CASH FLOW	($1,888)	($151)	($137)	($124)	($113)	$146	$263	$239

15 PV of Interest Tax Shield $307.74 [See next page for calculation]

16 NET PRESENT VALUE AT P $0
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$5.50
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	25	25
= ANNUAL COST	$110	$138

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	150.0	1.0
X		
PERCENTAGE UTILIZATION	15%	15%
= ANNUAL COST	$310	$378

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	5662.50	339.75	117.21	110.58
Year 2	4530.00	271.80	93.77	83.46
Year 3	3397.50	203.85	70.33	59.05
Year 4	2265.00	135.90	46.89	37.14
Year 5	1132.50	67.95	23.44	17.52
SUM				$307.74

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Technology:Hip X-Ray

NON-SPECIALIST, LOW COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$65.88	25	10.00%	75.00%	15.10%	$50,000	$936	10
HIGH ANN. PROCEDURES	$54.70	31.25	10.00%	75.00%	15.10%	$50,000	$936	10
LOW ANN. PROCEDURES	$84.54	18.75	10.00%	75.00%	15.10%	$50,000	$936	10
HIGH COST OF CAPITAL	$67.14	25	12.50%	75.00%	15.10%	$50,000	$936	10
LOW COST OF CAPITAL	$64.64	25	7.50%	75.00%	15.10%	$50,000	$936	10
LOW % UTILIZATION	$51.79	25	10.00%	75.00%	11.32%	$50,000	$936	10
HIGH % UTILIZATION	$80.07	25	10.00%	75.00%	18.88%	$50,000	$936	10
HIGH % CAP. BORROWED	$61.92	25	10.00%	93.75%	15.10%	$50,000	$936	10
HIGH EQUIP. PRICE	$76.78	25	10.00%	75.00%	15.10%	$62,500	$936	10
LOW EQUIP. PRICE	$55.00	25	10.00%	75.00%	15.10%	$37,500	$936	10
HIGH OP. EXPENSES	$75.24	25	10.00%	75.00%	15.10%	$50,000	$1,170	10
LOW OP. EXPENSES	$56.53	25	10.00%	75.00%	15.10%	$50,000	$702	10
LONG USEFUL LIFE	$54.68	25	10.00%	75.00%	15.10%	$50,000	$702	13
SHORT USEFUL LIFE	$74.80	25	10.00%	75.00%	15.10%	$50,000	$702	8

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Technology:	HIP X-R	Specialist? N
CPT-4 Code(s):	73510	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	25	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	150.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$8.00
Equipment Purchase Price:	$60,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	15.1%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$95.22	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$2,380	$2,380	$2,380	$2,380	$2,380	$2,380	$2,380
CASH OUTFLOWS								
2 Equip. purchase & salvage	$15,000	$9,245	$9,245	$9,245	$9,245	$9,245	$0	$0
3 x % utilization	$2,265	$1,396	$1,396	$1,396	$1,396	$1,396	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$110	$110	$110	$110	$110	$110	$110
6 supplies	$0	$200	$200	$200	$200	$200	$200	$200
7 maintenance	$0	$906	$906	$906	$906	$906	$906	$906
8 overhead	$0	$310	$310	$310	$310	$310	$310	$310
9 Total Expenses/Yr.	$2,265	$2,923	$2,923	$2,923	$2,923	$2,923	$1,527	$1,527
10 Taxes Before Depreciation	$0	($187)	($187)	($187)	($187)	($187)	$295	$295
11 Depreciation Tax Shield	$0	($156)	($156)	($156)	($156)	($638)	$0	$0
12 Net Cash Outflow/Yr.	$2,265	$2,579	$2,579	$2,579	$2,579	$2,098	$1,821	$1,821
13 NET CASH FLOW	($2,265)	($199)	($199)	($199)	($199)	$283	$559	$559
14 DISCOUNTED CASH FLOW	($2,265)	($181)	($164)	($149)	($136)	$176	$316	$287
15 PV of Interest Tax Shield	$369.29	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$8.00
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	25	25
= ANNUAL COST	$110	$200

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	150.0	1.0
X		
PERCENTAGE UTILIZATION	15%	15%
= ANNUAL COST	$310	$906

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	6795.00	407.70	140.66	132.69
Year 2	5436.00	326.16	112.53	100.15
Year 3	4077.00	244.62	84.39	70.86
Year 4	2718.00	163.08	56.26	44.57
Year 5	1359.00	81.54	28.13	21.02
SUM				$369.29

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Technology: Hip X_R	Specialist?	S
CPT-4 Code(s):	73510	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	235	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.05	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	200.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.50
Equipment Purchase Price:	$90,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	15.1%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$22.34	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$5,251	$5,251	$5,251	$5,251	$5,251	$5,251	$5,251
CASH OUTFLOWS								
2 Equip. purchase & salvage	$22,500	$13,867	$13,867	$13,867	$13,867	$13,867	$0	$0
3 x % utilization	$3,398	$2,094	$2,094	$2,094	$2,094	$2,094	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$1,584	$1,584	$1,584	$1,584	$1,584	$1,584	$1,584
6 supplies	$0	$1,293	$1,293	$1,293	$1,293	$1,293	$1,293	$1,293
7 maintenance	$0	$680	$680	$680	$680	$680	$680	$680
8 overhead	$0	$414	$414	$414	$414	$414	$414	$414
9 Total Expenses/Yr.	$3,398	$6,064	$6,064	$6,064	$6,064	$6,064	$3,970	$3,970
10 Taxes Before Depreciation	$0	($281)	($281)	($281)	($281)	($281)	$442	$442
11 Depreciation Tax Shield	$0	($234)	($234)	($234)	($234)	($957)	$0	$0
12 Net Cash Outflow/Yr.	$3,398	$5,549	$5,549	$5,549	$5,549	$4,826	$4,412	$4,412
13 NET CASH FLOW	($3,398)	($298)	($298)	($298)	($298)	$424	$839	$839
14 DISCOUNTED CASH FLOW	($3,398)	($271)	($247)	($224)	($204)	$263	$473	$430
15 PV of Interest Tax Shield	$553.93	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.05	$5.50
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	235	235
= ANNUAL COST	$1,584	$1,293

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	200.0	1.0
X		
PERCENTAGE UTILIZATION	15%	15%
= ANNUAL COST	$414	$680

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	10192.50	611.55	210.98	199.04
Year 2	8154.00	489.24	168.79	150.22
Year 3	6115.50	366.93	126.59	106.29
Year 4	4077.00	244.62	84.39	66.85
Year 5	2038.50	122.31	42.20	31.53
SUM				$553.93

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Hip X-Ray	Specialist?	S
CPT-4 Code(s):	73510	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	235	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.05	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	200.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$8.00
Equipment Purchase Price	$100,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	15%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$28.98	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$6,811	$6,811	$6,811	$6,811	$6,811	$6,811	$6,811
CASH OUTFLOWS								
2 Equip. purchase & salvage	$25,000	$15,408	$15,408	$15,408	$15,408	$15,408	$0	$0
3 x % utilization	$3,775	$2,327	$2,327	$2,327	$2,327	$2,327	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$1,584	$1,584	$1,584	$1,584	$1,584	$1,584	$1,584
6 supplies	$0	$1,880	$1,880	$1,880	$1,880	$1,880	$1,880	$1,880
7 maintenance	$0	$1,510	$1,510	$1,510	$1,510	$1,510	$1,510	$1,510
8 overhead	$0	$414	$414	$414	$414	$414	$414	$414
9 Total Expenses/Yr.	$3,775	$7,714	$7,714	$7,714	$7,714	$7,714	$5,388	$5,388
10 Taxes Before Depreciation	$0	($312)	($312)	($312)	($312)	($312)	$491	$491
11 Depreciation Tax Shield	$0	($260)	($260)	($260)	($260)	($1,063)	$0	$0
12 Net Cash Outflow/Yr.	$3,775	$7,142	$7,142	$7,142	$7,142	$6,340	$5,879	$5,879
13 NET CASH FLOW	($3,775)	($331)	($331)	($331)	($331)	$471	$932	$932
14 DISCOUNTED CASH FLOW	($3,775)	($301)	($274)	($249)	($226)	$293	$526	$478
15 PV of Interest Tax Shield	$615.48	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.05	$8.00
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	235	235
= ANNUAL COST	$1,584	$1,880

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	#########
X		
RESOURCE UNITS/YEAR	200.0	1.0
X		
PERCENTAGE UTILIZATION	15%	15%
= ANNUAL COST	$414	$1,510

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	11325.00	679.50	234.43	221.16
Year 2	9060.00	543.60	187.54	166.91
Year 3	6795.00	407.70	140.66	118.10
Year 4	4530.00	271.80	93.77	74.28
Year 5	2265.00	135.90	46.89	35.04
SUM				$615.48

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Hip X-Ray

SPECIALIST, HIGH COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$28.98	235	10.00%	75.00%	15.10%	$100,000	$5,388	10
HIGH ANN. PROCEDURES	$26.13	293.75	10.00%	75.00%	15.10%	$100,000	$5,388	10
LOW ANN. PROCEDURES	$33.73	176.25	10.00%	75.00%	15.10%	$100,000	$5,388	10
HIGH COST OF CAPITAL	$29.25	235	12.50%	75.00%	15.10%	$100,000	$5,388	10
LOW COST OF CAPITAL	$28.72	235	7.50%	75.00%	15.10%	$100,000	$5,388	10
LOW % UTILIZATION	$25.40	235	10.00%	75.00%	11.32%	$100,000	$5,388	10
HIGH % UTILIZATION	$32.58	235	10.00%	75.00%	18.88%	$100,000	$5,388	10
HIGH % CAP. BORROWED	$28.14	235	10.00%	93.75%	15.10%	$100,000	$5,388	10
HIGH EQUIP. PRICE	$32.10	235	10.00%	75.00%	15.10%	$125,000	$5,388	10
LOW EQUIP. PRICE	$25.86	235	10.00%	75.00%	15.10%	$75,000	$5,388	10
HIGH OP. EXPENSES	$34.71	235	10.00%	75.00%	15.10%	$100,000	$6,735	10
LOW OP. EXPENSES	$23.25	235	10.00%	75.00%	15.10%	$100,000	$4,041	10
LONG USEFUL LIFE	$22.86	235	10.00%	75.00%	15.10%	$100,000	$4,041	13
SHORT USEFUL LIFE	$27.14	235	10.00%	75.00%	15.10%	$100,000	$4,041	8

9. HIP X-RAY
NORMAL-RETURN VOLUMES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Hip X-Ray	Specialist?	N
CPT-4 Code(s):	73510	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	86.8	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	150.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.50
Equipment Purchase Price:	$50,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	15%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$26.03	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$2,261	$2,261	$2,261	$2,261	$2,261	$2,261	$2,261
CASH OUTFLOWS								
2 Equip. purchase & salvage	$12,500	$7,704	$7,704	$7,704	$7,704	$7,704	$0	$0
3 x % utilization	$1,888	$1,163	$1,163	$1,163	$1,163	$1,163	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$384	$384	$384	$384	$384	$384	$384
6 supplies	$0	$478	$478	$478	$478	$478	$478	$478
7 maintenance	$0	$378	$378	$378	$378	$378	$378	$378
8 overhead	$0	$310	$310	$310	$310	$310	$310	$310
9 Total Expenses/Yr.	$1,888	$2,712	$2,712	$2,712	$2,712	$2,712	$1,549	$1,549
10 Taxes Before Depreciation	$0	($156)	($156)	($156)	($156)	($156)	$245	$245
11 Depreciation Tax Shield	$0	($130)	($130)	($130)	($130)	($532)	$0	$0
12 Net Cash Outflow/Yr.	$1,888	$2,426	$2,426	$2,426	$2,426	$2,025	$1,795	$1,795
13 NET CASH FLOW	($1,888)	($166)	($166)	($166)	($166)	$236	$466	$466
14 DISCOUNTED CASH FLOW	($1,888)	($151)	($137)	($124)	($113)	$146	$263	$239
15 PV of Interest Tax Shield	$307.74	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$5.50
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	86.84823	86.84823
= ANNUAL COST	$384	$478

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	#########
X		
RESOURCE UNITS/YEAR	150.0	1.0
X		
PERCENTAGE UTILIZATION	15%	15%
= ANNUAL COST	$310	$378

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	5662.50	339.75	117.21	110.58
Year 2	4530.00	271.80	93.77	83.46
Year 3	3397.50	203.85	70.33	59.05
Year 4	2265.00	135.90	46.89	37.14
Year 5	1132.50	67.95	23.44	17.52
SUM				$307.74

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Hip X-Ray

NON-SPECIALIST, LOW COST

	BMAD TECH	BREAK EVEN PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$26.03	86.8	10.00%	75.00%	15.10%	$50,000	$2,325	10
HIGH ANN. PROCEDURES	$26.03	86.8	10.00%	75.00%	15.10%	$50,000	$2,325	10
LOW ANN. PROCEDURES	$26.03	86.8	10.00%	75.00%	15.10%	$50,000	$2,325	10
HIGH COST OF CAPITAL	$26.03	88.8	12.50%	75.00%	15.10%	$50,000	$2,325	10
LOW COST OF CAPITAL	$26.03	84.9	7.50%	75.00%	15.10%	$50,000	$2,325	10
LOW % UTILIZATION	$26.03	65.0	10.00%	75.00%	11.32%	$50,000	$2,325	10
HIGH % UTILIZATION	$26.03	108.8	10.00%	75.00%	18.88%	$50,000	$2,325	10
HIGH % CAP. BORROWED	$26.03	80.7	10.00%	93.75%	15.10%	$50,000	$2,325	10
HIGH EQUIP. PRICE	$26.03	103.7	10.00%	75.00%	15.10%	$62,500	$2,325	10
LOW EQUIP. PRICE	$26.03	70.0	10.00%	75.00%	15.10%	$37,500	$2,325	10
HIGH OP. EXPENSES	$26.03	115.3	10.00%	75.00%	15.10%	$50,000	$2,906	10
LOW OP. EXPENSES	$26.03	66.0	10.00%	75.00%	15.10%	$50,000	$1,743	10
LONG USEFUL LIFE	$26.03	83.5	10.00%	75.00%	15.10%	$50,000	$1,743	13
SHORT USEFUL LIFE	$26.03	90.6	10.00%	75.00%	15.10%	$50,000	$1,743	8

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Hip X-Ray	Specialist?	N
CPT-4 Code(s):	73510	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	152.1	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	150.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$8.00
Equipment Purchase Price:	$60,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	15.1%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$26.03	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$3,959	$3,959	$3,959	$3,959	$3,959	$3,959	$3,959
CASH OUTFLOWS								
2 Equip. purchase & salvage	$15,000	$9,245	$9,245	$9,245	$9,245	$9,245	$0	$0
3 x % utilization	$2,265	$1,396	$1,396	$1,396	$1,396	$1,396	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$672	$672	$672	$672	$672	$672	$672
6 supplies	$0	$1,217	$1,217	$1,217	$1,217	$1,217	$1,217	$1,217
7 maintenance	$0	$906	$906	$906	$906	$906	$906	$906
8 overhead	$0	$310	$310	$310	$310	$310	$310	$310
9 Total Expenses/Yr.	$2,265	$4,501	$4,501	$4,501	$4,501	$4,501	$3,105	$3,105
10 Taxes Before Depreciation	$0	($187)	($187)	($187)	($187)	($187)	$295	$295
11 Depreciation Tax Shield	$0	($156)	($156)	($156)	($156)	($638)	$0	$0
12 Net Cash Outflow/Yr.	$2,265	$4,158	$4,158	$4,158	$4,158	$3,676	$3,399	$3,399
13 NET CASH FLOW	($2,265)	($199)	($199)	($199)	($199)	$283	$559	$559
14 DISCOUNTED CASH FLOW	($2,265)	($181)	($164)	($149)	($136)	$176	$316	$287
15 PV of Interest Tax Shield	$369.29	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$8.00
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	152.0828	152.0828
= ANNUAL COST	$672	$1,217

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	150.0	1.0
X		
PERCENTAGE UTILIZATION	15%	15%
= ANNUAL COST	$310	$906

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	6795.00	407.70	140.66	132.69
Year 2	5436.00	326.16	112.53	100.15
Year 3	4077.00	244.62	84.39	70.86
Year 4	2718.00	163.08	56.26	44.57
Year 5	1359.00	81.54	28.13	21.02
SUM				$369.29

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Hip X-Ray	Specialist?	S
CPT-4 Code(s):	73510	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	172.1	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.05	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	200.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.50
Equipment Purchase Price:	$90,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	15.1%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$26.03	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$4,481	$4,481	$4,481	$4,481	$4,481	$4,481	$4,481
CASH OUTFLOWS								
2 Equip. purchase & salvage	$22,500	$13,867	$13,867	$13,867	$13,867	$13,867	$0	$0
3 x % utilization	$3,398	$2,094	$2,094	$2,094	$2,094	$2,094	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$1,160	$1,160	$1,160	$1,160	$1,160	$1,160	$1,160
6 supplies	$0	$947	$947	$947	$947	$947	$947	$947
7 maintenance	$0	$680	$680	$680	$680	$680	$680	$680
8 overhead	$0	$414	$414	$414	$414	$414	$414	$414
9 Total Expenses/Yr.	$3,398	$5,294	$5,294	$5,294	$5,294	$5,294	$3,201	$3,201
10 Taxes Before Depreciation	$0	($281)	($281)	($281)	($281)	($281)	$442	$442
11 Depreciation Tax Shield	$0	($234)	($234)	($234)	($234)	($957)	$0	$0
12 Net Cash Outflow/Yr.	$3,398	$4,779	$4,779	$4,779	$4,779	$4,057	$3,642	$3,642
13 NET CASH FLOW	($3,398)	($298)	($298)	($298)	($298)	$424	$839	$839
14 DISCOUNTED CASH FLOW	($3,398)	($271)	($247)	($224)	($204)	$263	$473	$430
15 PV of Interest Tax Shield	$553.93	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.05	$5.50
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	172.1488	172.1488
= ANNUAL COST	$1,160	$947

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	200.0	1.0
X		
PERCENTAGE UTILIZATION	15%	15%
= ANNUAL COST	$414	$680

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	10192.50	611.55	210.98	199.04
Year 2	8154.00	489.24	168.79	150.22
Year 3	6115.50	366.93	126.59	106.29
Year 4	4077.00	244.62	84.39	66.85
Year 5	2038.50	122.31	42.20	31.53
SUM				$553.93

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Hip X-Ray	Specialist?	S
CPT-4 Code(s):	73510	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	62.6	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.05	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	200.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$8.00
Equipment Purchase Price:	$10,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	15%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$26.03	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$1,630	$1,630	$1,630	$1,630	$1,630	$1,630	$1,630
CASH OUTFLOWS								
2 Equip. purchase & salvage	$2,500	$1,541	$1,541	$1,541	$1,541	$1,541	$0	$0
3 x % utilization	$378	$233	$233	$233	$233	$233	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$422	$422	$422	$422	$422	$422	$422
6 supplies	$0	$501	$501	$501	$501	$501	$501	$501
7 maintenance	$0	$151	$151	$151	$151	$151	$151	$151
8 overhead	$0	$414	$414	$414	$414	$414	$414	$414
9 Total Expenses/Yr.	$378	$1,721	$1,721	$1,721	$1,721	$1,721	$1,488	$1,488
10 Taxes Before Depreciation	$0	($31)	($31)	($31)	($31)	($31)	$49	$49
11 Depreciation Tax Shield	$0	($26)	($26)	($26)	($26)	($106)	$0	$0
12 Net Cash Outflow/Yr.	$378	$1,663	$1,663	$1,663	$1,663	$1,583	$1,537	$1,537
13 NET CASH FLOW	($378)	($33)	($33)	($33)	($33)	$47	$93	$93
14 DISCOUNTED CASH FLOW	($378)	($30)	($27)	($25)	($23)	$29	$53	$48
15 PV of Interest Tax Shield	$61.55	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.05	$8.00
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	62.62639	62.62639
= ANNUAL COST	$422	$501

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	#########
X		
RESOURCE UNITS/YEAR	200.0	1.0
X		
PERCENTAGE UTILIZATION	15%	15%
= ANNUAL COST	$414	$151

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	1132.50	67.95	23.44	22.12
Year 2	906.00	54.36	18.75	16.69
Year 3	679.50	40.77	14.07	11.81
Year 4	453.00	27.18	9.38	7.43
Year 5	226.50	13.59	4.69	3.50
SUM				$61.55

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Hip X-Ray

SPECIALIST, HIGH COST

	BMAD TECH	BREAK EVEN PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$26.03	62.6	10.00%	75.00%	15.10%	$10,000	$2,997	10
HIGH ANN. PROCEDURES	$26.03	62.6	10.00%	75.00%	15.10%	$10,000	$2,997	10
LOW ANN. PROCEDURES	$26.03	62.6	10.00%	75.00%	15.10%	$10,000	$2,997	10
HIGH COST OF CAPITAL	$26.03	63.2	12.50%	75.00%	15.10%	$10,000	$2,997	10
LOW COST OF CAPITAL	$26.03	62.1	7.50%	75.00%	15.10%	$10,000	$2,997	10
LOW % UTILIZATION	$26.03	46.9	10.00%	75.00%	11.32%	$10,000	$2,997	10
HIGH % UTILIZATION	$26.03	78.4	10.00%	75.00%	18.88%	$10,000	$2,997	10
HIGH % CAP. BORROWED	$26.03	60.9	10.00%	93.75%	15.10%	$10,000	$2,997	10
HIGH EQUIP. PRICE	$26.03	69.1	10.00%	75.00%	15.10%	$12,500	$2,997	10
LOW EQUIP. PRICE	$26.03	56.1	10.00%	75.00%	15.10%	$7,500	$2,997	10
HIGH OP. EXPENSES	$26.03	111.5	10.00%	75.00%	15.10%	$10,000	$3,747	10
LOW OP. EXPENSES	$26.03	37.8	10.00%	75.00%	15.10%	$10,000	$2,248	10
LONG USEFUL LIFE	$26.03	37.2	10.00%	75.00%	15.10%	$10,000	$2,248	13
SHORT USEFUL LIFE	$26.03	43.9	10.00%	75.00%	15.10%	$10,000	$2,248	8

10. SHOULDER X-RAY

10. SHOULDER X-RAY
NORMAL-RETURN PRICES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Shoulder X-Ray	Specialist?	N
CPT-4 Code(s):	73020	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	11	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.33
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	150.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$3.75
Equipment Purchase Price:	$50,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	7%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$64.18	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$706	$706	$706	$706	$706	$706	$706
CASH OUTFLOWS								
2 Equip. purchase & salvage	$12,500	$7,592	$7,592	$7,592	$7,592	$7,592	$0	$0
3 x % utilization	$850	$516	$516	$516	$516	$516	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$38	$38	$38	$38	$38	$38	$38
6 supplies	$0	$41	$41	$41	$41	$41	$41	$41
7 maintenance	$0	$170	$170	$170	$170	$170	$170	$170
8 overhead	$0	$140	$140	$140	$140	$140	$140	$140
9 Total Expenses/Yr.	$850	$905	$905	$905	$905	$905	$389	$389
10 Taxes Before Depreciation	$0	($69)	($69)	($69)	($69)	($69)	$109	$109
11 Depreciation Tax Shield	$0	($59)	($59)	($59)	($59)	($237)	$0	$0
12 Net Cash Outflow/Yr.	$850	$778	$778	$778	$778	$600	$498	$498
13 NET CASH FLOW	($850)	($72)	($72)	($72)	($72)	$106	$207	$207
14 DISCOUNTED CASH FLOW	($850)	($65)	($60)	($54)	($49)	$66	$117	$106
15 PV of Interest Tax Shield	$138.58	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$3.75
X		
RESOURCE UNITS/PROCEDURE	0.33	1.00
X		
PROCEDURES/YEAR	11	11
= ANNUAL COST	$38	$41

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	150.0	1.0
X		
PERCENTAGE UTILIZATION	7%	7%
= ANNUAL COST	$140	$170

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	2550.00	153.00	52.78	49.80
Year 2	2040.00	122.40	42.23	37.58
Year 3	1530.00	91.80	31.67	26.59
Year 4	1020.00	61.20	21.11	16.72
Year 5	510.00	30.60	10.56	7.89
SUM				$138.58

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Shoulder X-Ray

NON-SPECIALIST, LOW COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$64.16	11	10.00%	75.00%	6.80%	$50,000	$389	10
HIGH ANN. PROCEDURES	$52.78	13.75	10.00%	75.00%	6.80%	$50,000	$389	10
LOW ANN. PROCEDURES	$83.14	8.25	10.00%	75.00%	6.80%	$50,000	$389	10
HIGH COST OF CAPITAL	$65.45	11	12.50%	75.00%	6.80%	$50,000	$389	10
LOW COST OF CAPITAL	$62.90	11	7.50%	75.00%	6.80%	$50,000	$389	10
LOW % UTILIZATION	$49.88	11	10.00%	75.00%	5.10%	$50,000	$389	10
HIGH % UTILIZATION	$78.49	11	10.00%	75.00%	8.50%	$50,000	$389	10
HIGH % CAP. BORROWED	$60.03	11	10.00%	93.75%	6.80%	$50,000	$389	10
HIGH EQUIP. PRICE	$75.22	11	10.00%	75.00%	6.80%	$62,500	$389	10
LOW EQUIP. PRICE	$53.12	11	10.00%	75.00%	6.80%	$37,500	$389	10
HIGH OP. EXPENSES	$73.01	11	10.00%	75.00%	6.80%	$50,000	$486	10
LOW OP. EXPENSES	$55.33	11	10.00%	75.00%	6.80%	$50,000	$292	10
LONG USEFUL LIFE	$53.49	11	10.00%	75.00%	6.80%	$50,000	$292	13
SHORT USEFUL LIFE	$73.85	11	10.00%	75.00%	6.80%	$50,000	$292	8

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Shoulder X-Ray	Specialist?	N
CPT-4 Code(s):	73020	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	11	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.33
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	150.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$5.50
Equipment Purchase Price:	$60,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	6.8%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$93.30	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$1,026	$1,026	$1,026	$1,026	$1,026	$1,026	$1,026
CASH OUTFLOWS								
2 Equip. purchase & salvage	$15,000	$9,110	$9,110	$9,110	$9,110	$9,110	$0	$0
3 x % utilization	$1,020	$619	$619	$619	$619	$619	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$38	$38	$38	$38	$38	$38	$38
6 supplies	$0	$61	$61	$61	$61	$61	$61	$61
7 maintenance	$0	$408	$408	$408	$408	$408	$408	$408
8 overhead	$0	$140	$140	$140	$140	$140	$140	$140
9 Total Expenses/Yr.	$1,020	$1,266	$1,266	$1,266	$1,266	$1,266	$646	$646
10 Taxes Before Depreciation	$0	($83)	($83)	($83)	($83)	($83)	$131	$131
11 Depreciation Tax Shield	$0	($70)	($70)	($70)	($70)	($284)	$0	$0
12 Net Cash Outflow/Yr.	$1,020	$1,113	$1,113	$1,113	$1,113	$899	$777	$777
13 NET CASH FLOW	($1,020)	($87)	($87)	($87)	($87)	$127	$249	$249
14 DISCOUNTED CASH FLOW	($1,020)	($79)	($72)	($65)	($59)	$79	$140	$128
15 PV of Interest Tax Shield	$166.30	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$5.50
X		
RESOURCE UNITS/PROCEDURE	0.33	1.00
X		
PROCEDURES/YEAR	11	11
= ANNUAL COST	$38	$61

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	150.0	1.0
X		
PERCENTAGE UTILIZATION	7%	7%
= ANNUAL COST	$140	$408

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	3060.00	183.60	63.34	59.76
Year 2	2448.00	146.88	50.67	45.10
Year 3	1836.00	110.16	38.01	31.91
Year 4	1224.00	73.44	25.34	20.07
Year 5	612.00	36.72	12.67	9.47
SUM				$166.30

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Shoulder X-Ray	Specialist?	S
CPT-4 Code(s):	73020	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	106	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.33
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	200.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$3.75
Equipment Purchase Price:	$90,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	6.8%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$19.06	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$2,021	$2,021	$2,021	$2,021	$2,021	$2,021	$2,021
CASH OUTFLOWS								
2 Equip. purchase & salvage	$22,500	$13,665	$13,665	$13,665	$13,665	$13,665	$0	$0
3 x % utilization	$1,530	$929	$929	$929	$929	$929	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$561	$561	$561	$561	$561	$561	$561
6 supplies	$0	$398	$398	$398	$398	$398	$398	$398
7 maintenance	$0	$306	$306	$306	$306	$306	$306	$306
8 overhead	$0	$186	$186	$186	$186	$186	$186	$186
9 Total Expenses/Yr.	$1,530	$2,380	$2,380	$2,380	$2,380	$2,380	$1,451	$1,451
10 Taxes Before Depreciation	$0	($124)	($124)	($124)	($124)	($124)	$197	$197
11 Depreciation Tax Shield	$0	($106)	($106)	($106)	($106)	($426)	$0	$0
12 Net Cash Outflow/Yr.	$1,530	$2,151	$2,151	$2,151	$2,151	$1,830	$1,648	$1,648
13 NET CASH FLOW	($1,530)	($130)	($130)	($130)	($130)	$191	$373	$373
14 DISCOUNTED CASH FLOW	($1,530)	($118)	($107)	($98)	($89)	$118	$211	$192

15 PV of Interest Tax Shield $249.45 [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$3.75
X		
RESOURCE UNITS/PROCEDURE	0.33	1.00
X		
PROCEDURES/YEAR	106	106
= ANNUAL COST	$561	$398

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	200.0	1.0
X		
PERCENTAGE UTILIZATION	7%	7%
= ANNUAL COST	$186	$306

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	4590.00	275.40	95.01	89.63
Year 2	3672.00	220.32	76.01	67.65
Year 3	2754.00	165.24	57.01	47.86
Year 4	1836.00	110.16	38.01	30.10
Year 5	918.00	55.08	19.00	14.20
SUM				$249.45

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Shoulder X-Ray	Specialist?	S
CPT-4 Code(s):	73020	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	106	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.33
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	200.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$5.50
Equipment Purchase Price	$100,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	7%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$24.94	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$2,644	$2,644	$2,644	$2,644	$2,644	$2,644	$2,644
CASH OUTFLOWS								
2 Equip. purchase & salvage	$25,000	$15,184	$15,184	$15,184	$15,184	$15,184	$0	$0
3 x % utilization	$1,700	$1,032	$1,032	$1,032	$1,032	$1,032	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$561	$561	$561	$561	$561	$561	$561
6 supplies	$0	$583	$583	$583	$583	$583	$583	$583
7 maintenance	$0	$680	$680	$680	$680	$680	$680	$680
8 overhead	$0	$186	$186	$186	$186	$186	$186	$186
9 Total Expenses/Yr.	$1,700	$3,043	$3,043	$3,043	$3,043	$3,043	$2,010	$2,010
10 Taxes Before Depreciation	$0	($138)	($138)	($138)	($138)	($138)	$218	$218
11 Depreciation Tax Shield	$0	($117)	($117)	($117)	($117)	($474)	$0	$0
12 Net Cash Outflow/Yr.	$1,700	$2,788	$2,788	$2,788	$2,788	$2,432	$2,229	$2,229
13 NET CASH FLOW	($1,700)	($144)	($144)	($144)	($144)	$212	$415	$415
14 DISCOUNTED CASH FLOW	($1,700)	($131)	($119)	($108)	($98)	$132	$234	$213
15 PV of Interest Tax Shield	$277.17	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$5.50
X		
RESOURCE UNITS/PROCEDURE	0.33	1.00
X		
PROCEDURES/YEAR	106	106
= ANNUAL COST	$561	$583

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	200.0	1.0
X		
PERCENTAGE UTILIZATION	7%	7%
= ANNUAL COST	$186	$680

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	5100.00	306.00	105.57	99.59
Year 2	4080.00	244.80	84.46	75.17
Year 3	3060.00	183.60	63.34	53.18
Year 4	2040.00	122.40	42.23	33.45
Year 5	1020.00	61.20	21.11	15.78
SUM				$277.17

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Shoulder X-Ray

SPECIALIST, HIGH COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$24.94	106	10.00%	75.00%	6.80%	$100,000	$2,010	10
HIGH ANN. PROCEDURES	$22.11	132.5	10.00%	75.00%	6.80%	$100,000	$2,010	10
LOW ANN. PROCEDURES	$29.66	79.5	10.00%	75.00%	6.80%	$100,000	$2,010	10
HIGH COST OF CAPITAL	$25.21	106	12.50%	75.00%	6.80%	$100,000	$2,010	10
LOW COST OF CAPITAL	$24.68	106	7.50%	75.00%	6.80%	$100,000	$2,010	10
LOW % UTILIZATION	$21.39	106	10.00%	75.00%	5.10%	$100,000	$2,010	10
HIGH % UTILIZATION	$28.49	106	10.00%	75.00%	8.50%	$100,000	$2,010	10
HIGH % CAP. BORROWED	$24.08	106	10.00%	93.75%	6.80%	$100,000	$2,010	10
HIGH EQUIP. PRICE	$28.04	106	10.00%	75.00%	6.80%	$125,000	$2,010	10
LOW EQUIP. PRICE	$21.84	106	10.00%	75.00%	6.80%	$75,000	$2,010	10
HIGH OP. EXPENSES	$29.68	106	10.00%	75.00%	6.80%	$100,000	$2,513	10
LOW OP. EXPENSES	$20.20	106	10.00%	75.00%	6.80%	$100,000	$1,508	10
LONG USEFUL LIFE	$19.82	106	10.00%	75.00%	6.80%	$100,000	$1,508	13
SHORT USEFUL LIFE	$24.05	106	10.00%	75.00%	6.80%	$100,000	$1,508	8

BREAK EVEN VOLUME ANLAYSIS FOR
SHOULDER X-RAYS (73020) WERE
NOT DONE SINCE BMAD AVERAGE
TECHNICAL DIFFEENTIALS WERE
NOT AVAILABLE

11. KNEE X-RAY

11. KNEE X-RAY
NORMAL-RETURN PRICES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Knee X-Ray	Specialist?	N
CPT-4 Code(s):	73560	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	22	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	150.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.50
Equipment Purchase Price:	$50,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	13%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$64.17	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$1,412	$1,412	$1,412	$1,412	$1,412	$1,412	$1,412
CASH OUTFLOWS								
2 Equip. purchase & salvage	$12,500	$7,674	$7,674	$7,674	$7,674	$7,674	$0	$0
3 x % utilization	$1,613	$990	$990	$990	$990	$990	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$97	$97	$97	$97	$97	$97	$97
6 supplies	$0	$121	$121	$121	$121	$121	$121	$121
7 maintenance	$0	$323	$323	$323	$323	$323	$323	$323
8 overhead	$0	$265	$265	$265	$265	$265	$265	$265
9 Total Expenses/Yr.	$1,613	$1,796	$1,796	$1,796	$1,796	$1,796	$806	$806
10 Taxes Before Depreciation	$0	($132)	($132)	($132)	($132)	($132)	$209	$209
11 Depreciation Tax Shield	$0	($111)	($111)	($111)	($111)	($453)	$0	$0
12 Net Cash Outflow/Yr.	$1,613	$1,552	$1,552	$1,552	$1,552	$1,210	$1,015	$1,015
13 NET CASH FLOW	($1,613)	($140)	($140)	($140)	($140)	$201	$397	$397
14 DISCOUNTED CASH FLOW	($1,613)	($127)	($116)	($105)	($96)	$125	$224	$204
15 PV of Interest Tax Shield	$262.90	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$5.50
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	22	22
= ANNUAL COST	$97	$121

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	150.0	1.0
X		
PERCENTAGE UTILIZATION	13%	13%
= ANNUAL COST	$265	$323

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	4837.50	290.25	100.14	94.47
Year 2	3870.00	232.20	80.11	71.30
Year 3	2902.50	174.15	60.08	50.45
Year 4	1935.00	116.10	40.05	31.73
Year 5	967.50	58.05	20.03	14.97
SUM				$262.90

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Knee X-Ray

NON-SPECIALIST, LOW COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILII.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$64.17	22	10.00%	75.00%	12.90%	$50,000	$806	10
HIGH ANN. PROCEDURES	$53.32	27.5	10.00%	75.00%	12.90%	$50,000	$806	10
LOW ANN. PROCEDURES	$82.25	16.5	10.00%	75.00%	12.90%	$50,000	$806	10
HIGH COST OF CAPITAL	$65.39	22	12.50%	75.00%	12.90%	$50,000	$806	10
LOW COST OF CAPITAL	$62.96	22	7.50%	75.00%	12.90%	$50,000	$806	10
LOW % UTILIZATION	$50.52	22	10.00%	75.00%	9.68%	$50,000	$806	10
HIGH % UTILIZATION	$77.89	22	10.00%	75.00%	16.13%	$50,000	$806	10
HIGH % CAP. BORROWED	$60.30	22	10.00%	93.75%	12.90%	$50,000	$806	10
HIGH EQUIP. PRICE	$74.72	22	10.00%	75.00%	12.90%	$62,500	$806	10
LOW EQUIP. PRICE	$53.62	22	10.00%	75.00%	12.90%	$37,500	$806	10
HIGH OP. EXPENSES	$73.32	22	10.00%	75.00%	12.90%	$50,000	$1,007	10
LOW OP. EXPENSES	$55.02	22	10.00%	75.00%	12.90%	$50,000	$604	10
LONG USEFUL LIFE	$53.23	22	10.00%	75.00%	12.90%	$50,000	$604	13
SHORT USEFUL LIFE	$72.71	22	10.00%	75.00%	12.90%	$50,000	$604	8

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	knee X-Ray	Specialist?	N
CPT-4 Code(s):	73560	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	22	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	150.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$8.00
Equipment Purchase Price:	$60,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	12.9%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$92.70	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$2,039	$2,039	$2,039	$2,039	$2,039	$2,039	$2,039
CASH OUTFLOWS								
2 Equip. purchase & salvage	$15,000	$9,209	$9,209	$9,209	$9,209	$9,209	$0	$0
3 x % utilization	$1,935	$1,188	$1,188	$1,188	$1,188	$1,188	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$97	$97	$97	$97	$97	$97	$97
6 supplies	$0	$176	$176	$176	$176	$176	$176	$176
7 maintenance	$0	$774	$774	$774	$774	$774	$774	$774
8 overhead	$0	$265	$265	$265	$265	$265	$265	$265
9 Total Expenses/Yr.	$1,935	$2,500	$2,500	$2,500	$2,500	$2,500	$1,312	$1,312
10 Taxes Before Depreciation	$0	($159)	($159)	($159)	($159)	($159)	$251	$251
11 Depreciation Tax Shield	$0	($134)	($134)	($134)	($134)	($543)	$0	$0
12 Net Cash Outflow/Yr.	$1,935	$2,208	$2,208	$2,208	$2,208	$1,798	$1,563	$1,563
13 NET CASH FLOW	($1,935)	($168)	($168)	($168)	($168)	$241	$476	$476
14 DISCOUNTED CASH FLOW	($1,935)	($153)	($139)	($127)	($115)	$150	$269	$244
15 PV of Interest Tax Shield	$315.48	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$8.00
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	22	22
= ANNUAL COST	$97	$176

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	150.0	1.0
X		
PERCENTAGE UTILIZATION	13%	13%
= ANNUAL COST	$265	$774

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	5805.00	348.30	120.16	113.36
Year 2	4644.00	278.64	96.13	85.56
Year 3	3483.00	208.98	72.10	60.53
Year 4	2322.00	139.32	48.07	38.07
Year 5	1161.00	69.66	24.03	17.96
SUM				$315.48

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Knee X-Ray	Specialist?	S
CPT-4 Code(s):	73560	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	200	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	200.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.50
Equipment Purchase Price:	$90,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	12.9%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$22.36	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$4,472	$4,472	$4,472	$4,472	$4,472	$4,472	$4,472
CASH OUTFLOWS								
2 Equip. purchase & salvage	$22,500	$13,813	$13,813	$13,813	$13,813	$13,813	$0	$0
3 x % utilization	$2,903	$1,782	$1,782	$1,782	$1,782	$1,782	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$1,347	$1,347	$1,347	$1,347	$1,347	$1,347	$1,347
6 supplies	$0	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100
7 maintenance	$0	$581	$581	$581	$581	$581	$581	$581
8 overhead	$0	$353	$353	$353	$353	$353	$353	$353
9 Total Expenses/Yr.	$2,903	$5,163	$5,163	$5,163	$5,163	$5,163	$3,381	$3,381
10 Taxes Before Depreciation	$0	($239)	($239)	($239)	($239)	($239)	$376	$376
11 Depreciation Tax Shield	$0	($200)	($200)	($200)	($200)	($815)	$0	$0
12 Net Cash Outflow/Yr.	$2,903	$4,724	$4,724	$4,724	$4,724	$4,110	$3,758	$3,758
13 NET CASH FLOW	($2,903)	($253)	($253)	($253)	($253)	$362	$714	$714
14 DISCOUNTED CASH FLOW	($2,903)	($230)	($209)	($190)	($172)	$225	$403	$367
15 PV of Interest Tax Shield	$473.23	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$5.50
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	200	200
= ANNUAL COST	$1,347	$1,100

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	200.0	1.0
X		
PERCENTAGE UTILIZATION	13%	13%
= ANNUAL COST	$353	$581

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	8707.50	522.45	180.25	170.04
Year 2	6966.00	417.96	144.20	128.33
Year 3	5224.50	313.47	108.15	90.80
Year 4	3483.00	208.98	72.10	57.11
Year 5	1741.50	104.49	36.05	26.94
SUM				$473.23

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Knee X-Ray	Specialist?	S
CPT-4 Code(s):	73560	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	200	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	200.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$8.00
Equipment Purchase Price	$100,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	13%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$29.01	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$5,803	$5,803	$5,803	$5,803	$5,803	$5,803	$5,803
CASH OUTFLOWS								
2 Equip. purchase & salvage	$25,000	$15,348	$15,348	$15,348	$15,348	$15,348	$0	$0
3 x % utilization	$3,225	$1,980	$1,980	$1,980	$1,980	$1,980	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$1,347	$1,347	$1,347	$1,347	$1,347	$1,347	$1,347
6 supplies	$0	$1,600	$1,600	$1,600	$1,600	$1,600	$1,600	$1,600
7 maintenance	$0	$1,290	$1,290	$1,290	$1,290	$1,290	$1,290	$1,290
8 overhead	$0	$353	$353	$353	$353	$353	$353	$353
9 Total Expenses/Yr.	$3,225	$6,571	$6,571	$6,571	$6,571	$6,571	$4,591	$4,591
10 Taxes Before Depreciation	$0	($265)	($265)	($265)	($265)	($265)	$418	$418
11 Depreciation Tax Shield	$0	($223)	($223)	($223)	($223)	($906)	$0	$0
12 Net Cash Outflow/Yr.	$3,225	$6,083	$6,083	$6,083	$6,083	$5,400	$5,009	$5,009
13 NET CASH FLOW	($3,225)	($281)	($281)	($281)	($281)	$403	$794	$794
14 DISCOUNTED CASH FLOW	($3,225)	($255)	($232)	($211)	($192)	$250	$448	$407
15 PV of Interest Tax Shield	$525.81	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$8.00
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	200	200
= ANNUAL COST	$1,347	$1,600

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	200.0	1.0
X		
PERCENTAGE UTILIZATION	13%	13%
= ANNUAL COST	$353	$1,290

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	9675.00	580.50	200.27	188.94
Year 2	7740.00	464.40	160.22	142.59
Year 3	5805.00	348.30	120.16	100.89
Year 4	3870.00	232.20	80.11	63.45
Year 5	1935.00	116.10	40.05	29.93
SUM				$525.81

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Knee X-Ray

SPECIALIST, HIGH COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$29.01	200	10.00%	75.00%	12.90%	$100,000	$4,591	10
HIGH ANN. PROCEDURES	$26.16	250	10.00%	75.00%	12.90%	$100,000	$4,591	10
LOW ANN. PROCEDURES	$33.77	150	10.00%	75.00%	12.90%	$100,000	$4,591	10
HIGH COST OF CAPITAL	$29.28	200	12.50%	75.00%	12.90%	$100,000	$4,591	10
LOW COST OF CAPITAL	$28.75	200	7.50%	75.00%	12.90%	$100,000	$4,591	10
LOW % UTILIZATION	$25.42	200	10.00%	75.00%	9.68%	$100,000	$4,591	10
HIGH % UTILIZATION	$32.62	200	10.00%	75.00%	16.13%	$100,000	$4,591	10
HIGH % CAP. BORROWED	$28.16	200	10.00%	93.75%	12.90%	$100,000	$4,591	10
HIGH EQUIP. PRICE	$32.14	200	10.00%	75.00%	12.90%	$125,000	$4,591	10
LOW EQUIP. PRICE	$25.89	200	10.00%	75.00%	12.90%	$75,000	$4,591	10
HIGH OP. EXPENSES	$34.75	200	10.00%	75.00%	12.90%	$100,000	$5,739	10
LOW OP. EXPENSES	$23.28	200	10.00%	75.00%	12.90%	$100,000	$3,443	10
LONG USEFUL LIFE	$22.88	200	10.00%	75.00%	12.90%	$100,000	$3,443	13
SHORT USEFUL LIFE	$27.17	200	10.00%	75.00%	12.90%	$100,000	$3,443	8

11. KNEE X-RAY
NORMAL-RETURN VOLUMES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Knee X-Ray	Specialist?	N
CPT-4 Code(s):	73560	High-end/Low-end:	L

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	99.2	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	150.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.50
Equipment Purchase Price:	$50,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	13%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$21.95	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$2,177	$2,177	$2,177	$2,177	$2,177	$2,177	$2,177
CASH OUTFLOWS								
2 Equip. purchase & salvage	$12,500	$7,674	$7,674	$7,674	$7,674	$7,674	$0	$0
3 x % utilization	$1,613	$990	$990	$990	$990	$990	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$438	$438	$438	$438	$438	$438	$438
6 supplies	$0	$546	$546	$546	$546	$546	$546	$546
7 maintenance	$0	$323	$323	$323	$323	$323	$323	$323
8 overhead	$0	$265	$265	$265	$265	$265	$265	$265
9 Total Expenses/Yr.	$1,613	$2,561	$2,561	$2,561	$2,561	$2,561	$1,571	$1,571
10 Taxes Before Depreciation	$0	($133)	($133)	($133)	($133)	($133)	$209	$209
11 Depreciation Tax Shield	$0	($111)	($111)	($111)	($111)	($453)	$0	$0
12 Net Cash Outflow/Yr.	$1,613	$2,318	$2,318	$2,318	$2,318	$1,976	$1,780	$1,780
13 NET CASH FLOW	($1,613)	($140)	($140)	($140)	($140)	$201	$397	$397
14 DISCOUNTED CASH FLOW	($1,613)	($128)	($116)	($105)	($96)	$125	$224	$204

15 PV of Interest Tax Shield $262.90 [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$5.50
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	99.19229	99.19229404
= ANNUAL COST	$438	$546

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$2,500.00
X		
RESOURCE UNITS/YEAR	150.0	1.0
X		
PERCENTAGE UTILIZATION	13%	13%
= ANNUAL COST	$265	$323

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	4837.50	290.25	100.14	94.47
Year 2	3870.00	232.20	80.11	71.30
Year 3	2902.50	174.15	60.08	50.45
Year 4	1935.00	116.10	40.05	31.73
Year 5	967.50	58.05	20.03	14.97
SUM				$262.90

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Knee X-Ray

NON-SPECIALIST, LOW COST

	BMAD TECH	BREAK EVEN PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$21.95	99.2	10.00%	75.00%	12.90%	$50,000	$2,224	10
HIGH ANN. PROCEDURES	$21.95	99.2	10.00%	75.00%	12.90%	$50,000	$2,224	10
LOW ANN. PROCEDURES	$21.95	99.2	10.00%	75.00%	12.90%	$50,000	$2,224	10
HIGH COST OF CAPITAL	$21.95	101.4	12.50%	75.00%	12.90%	$50,000	$2,224	10
LOW COST OF CAPITAL	$21.95	97.0	7.50%	75.00%	12.90%	$50,000	$2,224	10
LOW % UTILIZATION	$21.95	74.2	10.00%	75.00%	9.68%	$50,000	$2,224	10
HIGH % UTILIZATION	$21.95	124.3	10.00%	75.00%	16.13%	$50,000	$2,224	10
HIGH % CAP. BORROWED	$21.95	92.1	10.00%	93.75%	12.90%	$50,000	$2,224	10
HIGH EQUIP. PRICE	$21.95	118.5	10.00%	75.00%	12.90%	$62,500	$2,224	10
LOW EQUIP. PRICE	$21.95	79.9	10.00%	75.00%	12.90%	$37,500	$2,224	10
HIGH OP. EXPENSES	$21.95	140.3	10.00%	75.00%	12.90%	$50,000	$2,781	10
LOW OP. EXPENSES	$21.95	72.1	10.00%	75.00%	12.90%	$50,000	$1,668	10
LONG USEFUL LIFE	$21.95	69.4	10.00%	75.00%	12.90%	$50,000	$1,668	13
SHORT USEFUL LIFE	$21.95	99.0	10.00%	75.00%	12.90%	$50,000	$1,668	8

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Knee X-Ray	Specialist?	N
CPT-4 Code(s):	73560	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	182	Personnel Time/Procedure:	0.42
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	150.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$8.00
Equipment Purchase Price:	$60,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	12.9%	Assumeoan Interest Rate:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$21.95	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$3,992	$3,992	$3,992	$3,992	$3,992	$3,992	$3,992
CASH OUTFLOWS								
2 Equip. purchase & salvage	$15,000	$9,209	$9,209	$9,209	$9,209	$9,209	$0	$0
3 x % utilization	$1,935	$1,188	$1,188	$1,188	$1,188	$1,188	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$803	$803	$803	$803	$803	$803	$803
6 supplies	$0	$1,455	$1,455	$1,455	$1,455	$1,455	$1,455	$1,455
7 maintenance	$0	$774	$774	$774	$774	$774	$774	$774
8 overhead	$0	$265	$265	$265	$265	$265	$265	$265
9 Total Expenses/Yr.	$1,935	$4,485	$4,485	$4,485	$4,485	$4,485	$3,297	$3,297
10 Taxes Before Depreciation	$0	($207)	($207)	($207)	($207)	($207)	$292	$292
11 Depreciation Tax Shield	$0	($163)	($163)	($163)	($163)	($661)	$0	$0
12 Net Cash Outflow/Yr.	$1,935	$4,115	$4,115	$4,115	$4,115	$3,616	$3,589	$3,589
13 NET CASH FLOW	($1,935)	($124)	($124)	($124)	($124)	$375	$403	$403
14 DISCOUNTED CASH FLOW	($1,935)	($113)	($102)	($93)	($85)	$233	$227	$207

15 PV of Interest Tax Shield $384.07 [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Knee X-Ray	Specialist?	S
CPT-4 Code(s):	73560	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	208	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	200.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.50
Equipment Purchase Price:	$90,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	12.9%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$21.95	Net Present Value:	($0)

	1						
	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$4,575	$4,575	$4,575	$4,575	$4,575	$4,575	$4,575
CASH OUTFLOWS								
2 Equip. purchase & salvage	$22,500	$13,813	$13,813	$13,813	$13,813	$13,813	$0	$0
3 x % utilization	$2,903	$1,782	$1,782	$1,782	$1,782	$1,782	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$1,404	$1,404	$1,404	$1,404	$1,404	$1,404	$1,404
6 supplies	$0	$1,146	$1,146	$1,146	$1,146	$1,146	$1,146	$1,146
7 maintenance	$0	$581	$581	$581	$581	$581	$581	$581
8 overhead	$0	$353	$353	$353	$353	$353	$353	$353
9 Total Expenses/Yr.	$2,903	$5,266	$5,266	$5,266	$5,266	$5,266	$3,485	$3,485
10 Taxes Before Depreciation	$0	($239)	($239)	($239)	($239)	($239)	$376	$376
11 Depreciation Tax Shield	$0	($200)	($200)	($200)	($200)	($815)	$0	$0
12 Net Cash Outflow/Yr.	$2,903	$4,828	$4,828	$4,828	$4,828	$4,213	$3,861	$3,861
13 NET CASH FLOW	($2,903)	($253)	($253)	($253)	($253)	$362	$714	$714
14 DISCOUNTED CASH FLOW	($2,903)	($230)	($209)	($190)	($172)	$225	$403	$367

15 PV of Interest Tax Shield $473.23 [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Knee X-Ray	Specialist?	S
CPT-4 Code(s):	73560	High-end/Low-end:	H

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	395.8	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	200.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$8.00
Equipment Purchase Price:	$100,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	13%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$21.95	Net Present Value:	($0)

1

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$8,689	$8,689	$8,689	$8,689	$8,689	$8,689	$8,689
CASH OUTFLOWS								
2 Equip. purchase & salvage	$25,000	$15,348	$15,348	$15,348	$15,348	$15,348	$0	$0
3 x % utilization	$3,225	$1,980	$1,980	$1,980	$1,980	$1,980	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$2,667	$2,667	$2,667	$2,667	$2,667	$2,667	$2,667
6 supplies	$0	$3,167	$3,167	$3,167	$3,167	$3,167	$3,167	$3,167
7 maintenance	$0	$1,290	$1,290	$1,290	$1,290	$1,290	$1,290	$1,290
8 overhead	$0	$353	$353	$353	$353	$353	$353	$353
9 Total Expenses/Yr.	$3,225	$9,457	$9,457	$9,457	$9,457	$9,457	$7,477	$7,477
10 Taxes Before Depreciation	$0	($265)	($265)	($265)	($265)	($265)	$418	$418
11 Depreciation Tax Shield	$0	($223)	($223)	($223)	($223)	($906)	$0	$0
12 Net Cash Outflow/Yr.	$3,225	$8,969	$8,969	$8,969	$8,969	$8,286	$7,895	$7,895
13 NET CASH FLOW	($3,225)	($281)	($281)	($281)	($281)	$402	$794	$794
14 DISCOUNTED CASH FLOW	($3,225)	($255)	($232)	($211)	($192)	$250	$448	$407
15 PV of Interest Tax Shield	$525.81	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$8.00
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	395.8382	395.8381928
= ANNUAL COST	$2,667	$3,167

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$10,000.00
X		
RESOURCE UNITS/YEAR	200.0	1.0
X		
PERCENTAGE UTILIZATION	13%	13%
= ANNUAL COST	$353	$1,290

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	9675.00	580.50	200.27	188.94
Year 2	7740.00	464.40	160.22	142.59
Year 3	5805.00	348.30	120.16	100.89
Year 4	3870.00	232.20	80.11	63.45
Year 5	1935.00	116.10	40.05	29.93
SUM				$525.81

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Knee X-Ray

SPECIALIST, HIGH COST

	BMAD TECH	BREAK EVEN PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$21.95	395.8	10.00%	75.00%	12.90%	$100,000	$4,075	10
HIGH ANN. PROCEDURES	$21.95	395.8	10.00%	75.00%	12.90%	$100,000	$4,075	10
LOW ANN. PROCEDURES	$21.95	395.8	10.00%	75.00%	12.90%	$100,000	$4,075	10
HIGH COST OF CAPITAL	$21.95	403.2	12.50%	75.00%	12.90%	$100,000	$4,075	10
LOW COST OF CAPITAL	$21.95	388.5	7.50%	75.00%	12.90%	$100,000	$4,075	10
LOW % UTILIZATION	$21.95	296.3	10.00%	75.00%	9.68%	$100,000	$4,075	10
HIGH % UTILIZATION	$21.95	495.7	10.00%	75.00%	16.13%	$100,000	$4,075	10
HIGH % CAP. BORROWED	$21.95	372.2	10.00%	93.75%	12.90%	$100,000	$4,075	10
HIGH EQUIP. PRICE	$21.95	482.5	10.00%	75.00%	12.90%	$125,000	$4,075	10
LOW EQUIP. PRICE	$21.95	309.1	10.00%	75.00%	12.90%	$75,000	$4,075	10
HIGH OP. EXPENSES	$21.95	925.5	10.00%	75.00%	12.90%	$100,000	$5,094	10
LOW OP. EXPENSES	$21.95	224.3	10.00%	75.00%	12.90%	$100,000	$3,057	10
LONG USEFUL LIFE	$21.95	217.1	10.00%	75.00%	12.90%	$100,000	$3,057	13
SHORT USEFUL LIFE	$21.95	295.8	10.00%	75.00%	12.90%	$100,000	$3,057	8

12. FOOT X-RAY

12. FOOT X-RAY
NORMAL-RETURN PRICES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Foot X-Ray	Specialist?	N
CPT-4 Code(s):	73620	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	18	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	150.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.50
Equipment Purchase Price:	$50,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	11%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$64.84	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$1,167	$1,167	$1,167	$1,167	$1,167	$1,167	$1,167
CASH OUTFLOWS								
2 Equip. purchase & salvage	$12,500	$7,644	$7,644	$7,644	$7,644	$7,644	$0	$0
3 x % utilization	$1,338	$818	$818	$818	$818	$818	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$80	$80	$80	$80	$80	$80	$80
6 supplies	$0	$99	$99	$99	$99	$99	$99	$99
7 maintenance	$0	$268	$268	$268	$268	$268	$268	$268
8 overhead	$0	$220	$220	$220	$220	$220	$220	$220
9 Total Expenses/Yr.	$1,338	$1,484	$1,484	$1,484	$1,484	$1,484	$666	$666
10 Taxes Before Depreciation	$0	($109)	($109)	($109)	($109)	($109)	$173	$173
11 Depreciation Tax Shield	$0	($92)	($92)	($92)	($92)	($374)	$0	$0
12 Net Cash Outflow/Yr.	$1,338	$1,282	$1,282	$1,282	$1,282	$1,000	$839	$839
13 NET CASH FLOW	($1,338)	($115)	($115)	($115)	($115)	$167	$328	$328
14 DISCOUNTED CASH FLOW	($1,338)	($105)	($95)	($87)	($79)	$104	$185	$168
15 PV of Interest Tax Shield	$218.07	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$5.50
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	18	18
= ANNUAL COST	$80	$99

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	150.0	1.0
X		
PERCENTAGE UTILIZATION	11%	11%
= ANNUAL COST	$220	$268

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	4012.50	240.75	83.06	78.36
Year 2	3210.00	192.60	66.45	59.14
Year 3	2407.50	144.45	49.84	41.84
Year 4	1605.00	96.30	33.22	26.32
Year 5	802.50	48.15	16.61	12.41
SUM				$218.07

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Foot X-Ray

NON-SPECIALIST, LOW COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$64.83	18	10.00%	75.00%	10.70%	$50,000	$666	10
HIGH ANN. PROCEDURES	$53.85	22.5	10.00%	75.00%	10.70%	$50,000	$666	10
LOW ANN. PROCEDURES	$83.13	13.5	10.00%	75.00%	10.70%	$50,000	$666	10
HIGH COST OF CAPITAL	$66.06	18	12.50%	75.00%	10.70%	$50,000	$666	10
LOW COST OF CAPITAL	$63.60	18	7.50%	75.00%	10.70%	$50,000	$666	10
LOW % UTILIZATION	$51.03	18	10.00%	75.00%	8.03%	$50,000	$666	10
HIGH % UTILIZATION	$78.69	18	10.00%	75.00%	13.38%	$50,000	$666	10
HIGH % CAP. BORROWED	$60.88	18	10.00%	93.75%	10.70%	$50,000	$666	10
HIGH EQUIP. PRICE	$75.50	18	10.00%	75.00%	10.70%	$62,500	$666	10
LOW EQUIP. PRICE	$54.16	18	10.00%	75.00%	10.70%	$37,500	$666	10
HIGH OP. EXPENSES	$74.08	18	10.00%	75.00%	10.70%	$50,000	$832	10
LOW OP. EXPENSES	$55.58	18	10.00%	75.00%	10.70%	$50,000	$499	10
LONG USEFUL LIFE	$53.79	18	10.00%	75.00%	10.70%	$50,000	$499	13
SHORT USEFUL LIFE	$73.48	18	10.00%	75.00%	10.70%	$50,000	$499	8

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Foot X-Ray	Specialist?	N
CPT-4 Code(s):	73620	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	18	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$10.52	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	150.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$8.00
Equipment Purchase Price:	$60,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	10.7%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$93.70	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$1,687	$1,687	$1,687	$1,687	$1,687	$1,687	$1,687
CASH OUTFLOWS								
2 Equip. purchase & salvage	$15,000	$9,173	$9,173	$9,173	$9,173	$9,173	$0	$0
3 x % utilization	$1,605	$982	$982	$982	$982	$982	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$80	$80	$80	$80	$80	$80	$80
6 supplies	$0	$144	$144	$144	$144	$144	$144	$144
7 maintenance	$0	$642	$642	$642	$642	$642	$642	$642
8 overhead	$0	$220	$220	$220	$220	$220	$220	$220
9 Total Expenses/Yr.	$1,605	$2,067	$2,067	$2,067	$2,067	$2,067	$1,085	$1,085
10 Taxes Before Depreciation	$0	($131)	($131)	($131)	($131)	($131)	$207	$207
11 Depreciation Tax Shield	$0	($111)	($111)	($111)	($111)	($449)	$0	$0
12 Net Cash Outflow/Yr.	$1,605	$1,825	$1,825	$1,825	$1,825	$1,486	$1,293	$1,293
13 NET CASH FLOW	($1,605)	($138)	($138)	($138)	($138)	$200	$394	$394
14 DISCOUNTED CASH FLOW	($1,605)	($126)	($114)	($104)	($95)	$124	$222	$202
15 PV of Interest Tax Shield	$261.68	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.52	$8.00
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	18	18
= ANNUAL COST	$80	$144

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	150.0	1.0
X		
PERCENTAGE UTILIZATION	11%	11%
= ANNUAL COST	$220	$642

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	4815.00	288.90	99.67	94.03
Year 2	3852.00	231.12	79.74	70.97
Year 3	2889.00	173.34	59.80	50.21
Year 4	1926.00	115.56	39.87	31.58
Year 5	963.00	57.78	19.93	14.90
SUM				$261.68

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Foot X-Ray	Specialist?	S
CPT-4 Code(s):	73620	High-end/Low-end:	L

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	166	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	200.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.50
Equipment Purchase Price:	$90,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	10.7%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$22.34	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$3,708	$3,708	$3,708	$3,708	$3,708	$3,708	$3,708
CASH OUTFLOWS								
2 Equip. purchase & salvage	$22,500	$13,760	$13,760	$13,760	$13,760	$13,760	$0	$0
3 x % utilization	$2,408	$1,472	$1,472	$1,472	$1,472	$1,472	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$1,118	$1,118	$1,118	$1,118	$1,118	$1,118	$1,118
6 supplies	$0	$913	$913	$913	$913	$913	$913	$913
7 maintenance	$0	$482	$482	$482	$482	$482	$482	$482
8 overhead	$0	$293	$293	$293	$293	$293	$293	$293
9 Total Expenses/Yr.	$2,408	$4,278	$4,278	$4,278	$4,278	$4,278	$2,806	$2,806
10 Taxes Before Depreciation	$0	($197)	($197)	($197)	($197)	($197)	$311	$311
11 Depreciation Tax Shield	$0	($166)	($166)	($166)	($166)	($674)	$0	$0
12 Net Cash Outflow/Yr.	$2,408	$3,915	$3,915	$3,915	$3,915	$3,407	$3,117	$3,117
13 NET CASH FLOW	($2,408)	($208)	($208)	($208)	($208)	$300	$591	$591
14 DISCOUNTED CASH FLOW	($2,408)	($189)	($172)	($156)	($142)	$187	$333	$303

15 PV of Interest Tax Shield $392.52 [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$5.50
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	166	166
= ANNUAL COST	$1,118	$913

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	200.0	1.0
X		
PERCENTAGE UTILIZATION	11%	11%
= ANNUAL COST	$293	$482

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	7222.50	433.35	149.51	141.04
Year 2	5778.00	346.68	119.60	106.45
Year 3	4333.50	260.01	89.70	75.32
Year 4	2889.00	173.34	59.80	47.37
Year 5	1444.50	86.67	29.90	22.34
SUM				$392.52

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Foot X-Ray	Specialist?	S
CPT-4 Code(s):	73620	High-end/Low-end:	H

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	166	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.42
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	200.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$8.00
Equipment Purchase Price	$100,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	11%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$28.99	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$4,812	$4,812	$4,812	$4,812	$4,812	$4,812	$4,812
CASH OUTFLOWS								
2 Equip. purchase & salvage	$25,000	$15,289	$15,289	$15,289	$15,289	$15,289	$0	$0
3 x % utilization	$2,675	$1,636	$1,636	$1,636	$1,636	$1,636	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$1,118	$1,118	$1,118	$1,118	$1,118	$1,118	$1,118
6 supplies	$0	$1,328	$1,328	$1,328	$1,328	$1,328	$1,328	$1,328
7 maintenance	$0	$1,070	$1,070	$1,070	$1,070	$1,070	$1,070	$1,070
8 overhead	$0	$293	$293	$293	$293	$293	$293	$293
9 Total Expenses/Yr.	$2,675	$5,445	$5,445	$5,445	$5,445	$5,445	$3,809	$3,809
10 Taxes Before Depreciation	$0	($219)	($219)	($219)	($219)	($219)	$346	$346
11 Depreciation Tax Shield	$0	($185)	($185)	($185)	($185)	($749)	$0	$0
12 Net Cash Outflow/Yr.	$2,675	$5,042	$5,042	$5,042	$5,042	$4,478	$4,155	$4,155
13 NET CASH FLOW	($2,675)	($231)	($231)	($231)	($231)	$334	$656	$656
14 DISCOUNTED CASH FLOW	($2,675)	($210)	($191)	($173)	($158)	$207	$370	$337

15 PV of Interest Tax Shield $436.13 [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$8.00
X		
RESOURCE UNITS/PROCEDURE	0.42	1.00
X		
PROCEDURES/YEAR	166	166
= ANNUAL COST	$1,118	$1,328

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	200.0	1.0
X		
PERCENTAGE UTILIZATION	11%	11%
= ANNUAL COST	$293	$1,070

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	8025.00	481.50	166.12	156.71
Year 2	6420.00	385.20	132.89	118.28
Year 3	4815.00	288.90	99.67	83.69
Year 4	3210.00	192.60	66.45	52.63
Year 5	1605.00	96.30	33.22	24.83
SUM				$436.13

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Foot X-Ray

SPECIALIST, HIGH COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$28.99	166	10.00%	75.00%	10.70%	$100,000	$3,809	10
HIGH ANN. PROCEDURES	$26.14	207.5	10.00%	75.00%	10.70%	$100,000	$3,809	10
LOW ANN. PROCEDURES	$33.73	124.5	10.00%	75.00%	10.70%	$100,000	$3,809	10
HIGH COST OF CAPITAL	$29.25	166	12.50%	75.00%	10.70%	$100,000	$3,809	10
LOW COST OF CAPITAL	$28.72	166	7.50%	75.00%	10.70%	$100,000	$3,809	10
LOW % UTILIZATION	$25.41	166	10.00%	75.00%	8.03%	$100,000	$3,809	10
HIGH % UTILIZATION	$32.58	166	10.00%	75.00%	13.38%	$100,000	$3,809	10
HIGH % CAP. BORROWED	$28.13	166	10.00%	93.75%	10.70%	$100,000	$3,809	10
HIGH EQUIP. PRICE	$32.11	166	10.00%	75.00%	10.70%	$125,000	$3,809	10
LOW EQUIP. PRICE	$25.86	166	10.00%	75.00%	10.70%	$75,000	$3,809	10
HIGH OP. EXPENSES	$34.72	166	10.00%	75.00%	10.70%	$100,000	$4,762	10
LOW OP. EXPENSES	$23.25	166	10.00%	75.00%	10.70%	$100,000	$2,857	10
LONG USEFUL LIFE	$22.86	166	10.00%	75.00%	10.70%	$100,000	$2,857	13
SHORT USEFUL LIFE	$27.13	166	10.00%	75.00%	10.70%	$100,000	$2,857	8

BREAK EVEN VOLUME ANLAYSIS FOR
FOOT X-RAYS (73620) WERE
NOT DONE SINCE BMAD AVERAGE
TECHNICAL DIFFEENTIALS WERE
NOT AVAILABLE

13. UPPER G.I. X-RAY

13. UPPER G.I. X-RAY
NORMAL-RETURN PRICES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Upper G.I.	Specialist?	N S
CPT-4 Code(s):	74240	High-end/Low-end:	L

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	333	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.50
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	288.00
Annual Maintenance %:	4.00%	Supply Cost/Procedure:	$12.00
Equipment Purchase Price	$150,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	50%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$57.21	Net Present Value:	($0)

1

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$19,051	$19,051	$19,051	$19,051	$19,051	$19,051	$19,051
CASH OUTFLOWS								
2 Equip. purchase & salvage	$37,500	$24,525	$24,525	$24,525	$24,525	$24,525	$0	$0
3 x % utilization	$18,750	$12,263	$12,263	$12,263	$12,263	$12,263	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$2,671	$2,671	$2,671	$2,671	$2,671	$2,671	$2,671
6 supplies	$0	$3,996	$3,996	$3,996	$3,996	$3,996	$3,996	$3,996
7 maintenance	$0	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000
8 overhead	$0	$1,973	$1,973	$1,973	$1,973	$1,973	$1,973	$1,973
9 Total Expenses/Yr.	$18,750	$23,902	$23,902	$23,902	$23,902	$23,902	$11,639	$11,639
10 Taxes Before Depreciation	$0	($1,674)	($1,674)	($1,674)	($1,674)	($1,674)	$2,557	$2,557
11 Depreciation Tax Shield	$0	($1,294)	($1,294)	($1,294)	($1,294)	($5,524)	$0	$0
12 Net Cash Outflow/Yr.	$18,750	$20,935	$20,935	$20,935	$20,935	$16,704	$14,196	$14,196
13 NET CASH FLOW	($18,750)	($1,884)	($1,884)	($1,884)	($1,884)	$2,347	$4,854	$4,854
14 DISCOUNTED CASH FLOW	($18,750)	($1,713)	($1,557)	($1,415)	($1,287)	$1,457	$2,740	$2,491

15 PV of Interest Tax Shield######### [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$12.00
X		
RESOURCE UNITS/PROCEDURE	0.50	1.00
X		
PROCEDURES/YEAR	333	333
= ANNUAL COST	$2,671	$3,996

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	288.0	1.0
X		
PERCENTAGE UTILIZATION	50%	50%
= ANNUAL COST	$1,973	$3,000

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	56250.00	3375.00	1164.38	1098.47
Year 2	45000.00	2700.00	931.50	829.03
Year 3	33750.00	2025.00	698.63	586.58
Year 4	22500.00	1350.00	465.75	368.92
Year 5	11250.00	675.00	232.87	174.02
SUM				*********

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Upper G.I.

SPECIALIST, LOW COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$57.21	333	10.00%	75.00%	50.00%	$150,000	$11,639	10
HIGH ANN. PROCEDURES	$49.77	416.25	10.00%	75.00%	50.00%	$150,000	$11,639	10
LOW ANN. PROCEDURES	$69.61	249.75	10.00%	75.00%	50.00%	$150,000	$11,639	10
HIGH COST OF CAPITAL	$58.16	333	12.50%	75.00%	50.00%	$150,000	$11,639	10
LOW COST OF CAPITAL	$56.26	333	7.50%	75.00%	50.00%	$150,000	$11,639	10
LOW % UTILIZATION	$47.63	333	10.00%	75.00%	37.50%	$150,000	$11,639	10
HIGH % UTILIZATION	$66.97	333	10.00%	75.00%	62.50%	$150,000	$11,639	10
HIGH % CAP. BORROWED	$54.51	333	10.00%	93.75%	50.00%	$150,000	$11,639	10
HIGH EQUIP. PRICE	$65.03	333	10.00%	75.00%	50.00%	$187,500	$11,639	10
LOW EQUIP. PRICE	$49.39	333	10.00%	75.00%	50.00%	$112,500	$11,639	10
HIGH OP. EXPENSES	$65.95	333	10.00%	75.00%	50.00%	$150,000	$14,549	10
LOW OP. EXPENSES	$48.47	333	10.00%	75.00%	50.00%	$150,000	$8,730	10
LONG USEFUL LIFE	$55.65	333	10.00%	75.00%	50.00%	$150,000	$8,730	13
SHORT USEFUL LIFE	$71.31	333	10.00%	75.00%	50.00%	$150,000	$8,730	8

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Upper G.I.	Specialist?	S
CPT-4 Code(s):	74240	High-end/Low-end:	H

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	333	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.50
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	288.00
Annual Maintenance %:	8.00%	Supply Cost/Procedure:	$15.00
Equipment Purchase Price	$200,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	50%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$82.64	Net Present Value:	($0)

1

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$27,520	$27,520	$27,520	$27,520	$27,520	$27,520	$27,520
CASH OUTFLOWS								
2 Equip. purchase & salvage	$50,000	$32,700	$32,700	$32,700	$32,700	$32,700	$0	$0
3 x % utilization	$25,000	$16,350	$16,350	$16,350	$16,350	$16,350	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$2,671	$2,671	$2,671	$2,671	$2,671	$2,671	$2,671
6 supplies	$0	$4,995	$4,995	$4,995	$4,995	$4,995	$4,995	$4,995
7 maintenance	$0	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000
8 overhead	$0	$1,973	$1,973	$1,973	$1,973	$1,973	$1,973	$1,973
9 Total Expenses/Yr.	$25,000	$33,988	$33,988	$33,988	$33,988	$33,988	$17,638	$17,638
10 Taxes Before Depreciation	$0	($2,232)	($2,232)	($2,232)	($2,232)	($2,232)	$3,409	$3,409
11 Depreciation Tax Shield	$0	($1,725)	($1,725)	($1,725)	($1,725)	($7,366)	$0	$0
12 Net Cash Outflow/Yr.	$25,000	$30,032	$30,032	$30,032	$30,032	$24,391	$21,048	$21,048
13 NET CASH FLOW	($25,000)	($2,512)	($2,512)	($2,512)	($2,512)	$3,129	$6,472	$6,472
14 DISCOUNTED CASH FLOW	($25,000)	($2,283)	($2,076)	($1,887)	($1,716)	$1,943	$3,654	$3,321

15 PV of Interest Tax Shield######## [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$15.00
X		
RESOURCE UNITS/PROCEDURE	0.50	1.00
X		
PROCEDURES/YEAR	333	333
= ANNUAL COST	$2,671	$4,995

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	288.0	1.0
X		
PERCENTAGE UTILIZATION	50%	50%
= ANNUAL COST	$1,973	$8,000

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	75000.00	4500.00	1552.50	1464.62
Year 2	60000.00	3600.00	1242.00	1105.38
Year 3	45000.00	2700.00	931.50	782.11
Year 4	30000.00	1800.00	621.00	491.89
Year 5	15000.00	900.00	310.50	232.02
SUM				*********

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Upper G.I.

SPECIALIST, HIGH COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$82.64	333	10.00%	75.00%	50.00%	$200,000	$17,638	10
HIGH ANN. PROCEDURES	$70.72	416.25	10.00%	75.00%	50.00%	$200,000	$17,638	10
LOW ANN. PROCEDURES	$102.52	249.75	10.00%	75.00%	50.00%	$200,000	$17,638	10
HIGH COST OF CAPITAL	$83.91	333	12.50%	75.00%	50.00%	$200,000	$17,638	10
LOW COST OF CAPITAL	$81.37	333	7.50%	75.00%	50.00%	$200,000	$17,638	10
LOW % UTILIZATION	$67.37	333	10.00%	75.00%	37.50%	$200,000	$17,638	10
HIGH % UTILIZATION	$98.17	333	10.00%	75.00%	62.50%	$200,000	$17,638	10
HIGH % CAP. BORROWED	$79.04	333	10.00%	93.75%	50.00%	$200,000	$17,638	10
HIGH EQUIP. PRICE	$96.07	333	10.00%	75.00%	50.00%	$250,000	$17,638	10
LOW EQUIP. PRICE	$69.22	333	10.00%	75.00%	50.00%	$150,000	$17,638	10
HIGH OP. EXPENSES	$95.88	333	10.00%	75.00%	50.00%	$200,000	$22,048	10
LOW OP. EXPENSES	$69.40	333	10.00%	75.00%	50.00%	$200,000	$13,229	10
LONG USEFUL LIFE	$80.57	333	10.00%	75.00%	50.00%	$200,000	$13,229	13
SHORT USEFUL LIFE	$101.45	333	10.00%	75.00%	50.00%	$200,000	$13,229	8

13. UPPER G.I. X-RAY
NORMAL-RETURN VOLUME

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Upper G.I.	Specialist?	S
CPT-4 Code(s):	74240	High-end/Low-end:	L

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	293.6	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.50
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	288.00
Annual Maintenance %:	4.00%	Supply Cost/Procedure:	$12.00
Equipment Purchase Price:	$150,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	50%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$62.20	Net Present Value:	$0

1

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$18,262	$18,262	$18,262	$18,262	$18,262	$18,262	$18,262
CASH OUTFLOWS								
2 Equip. purchase & salvage	$37,500	$24,525	$24,525	$24,525	$24,525	$24,525	$0	$0
3 x % utilization	$18,750	$12,263	$12,263	$12,263	$12,263	$12,263	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$2,355	$2,355	$2,355	$2,355	$2,355	$2,355	$2,355
6 supplies	$0	$3,523	$3,523	$3,523	$3,523	$3,523	$3,523	$3,523
7 maintenance	$0	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000
8 overhead	$0	$1,973	$1,973	$1,973	$1,973	$1,973	$1,973	$1,973
9 Total Expenses/Yr.	$18,750	$23,113	$23,113	$23,113	$23,113	$23,113	$10,851	$10,851
10 Taxes Before Depreciation	$0	($1,674)	($1,674)	($1,674)	($1,674)	($1,674)	$2,557	$2,557
11 Depreciation Tax Shield	$0	($1,294)	($1,294)	($1,294)	($1,294)	($5,524)	$0	$0
12 Net Cash Outflow/Yr.	$18,750	$20,146	$20,146	$20,146	$20,146	$15,915	$13,408	$13,408
13 NET CASH FLOW	($18,750)	($1,884)	($1,884)	($1,884)	($1,884)	$2,347	$4,854	$4,854
14 DISCOUNTED CASH FLOW	($18,750)	($1,712)	($1,557)	($1,415)	($1,287)	$1,457	$2,740	$2,491
15 PV of Interest Tax Shield	$3,057.01	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$12.00
X		
RESOURCE UNITS/PROCEDURE	0.50	1.00
X		
PROCEDURES/YEAR	293.6033	293.6032998
= ANNUAL COST	$2,355	$3,523

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$6,000.00
X		
RESOURCE UNITS/YEAR	288.0	1.0
X		
PERCENTAGE UTILIZATION	50%	50%
= ANNUAL COST	$1,973	$3,000

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	56250.00	3375.00	1164.38	1098.47
Year 2	45000.00	2700.00	931.50	829.03
Year 3	33750.00	2025.00	698.63	586.58
Year 4	22500.00	1350.00	465.75	368.92
Year 5	11250.00	675.00	232.87	174.02
SUM				$3,057.01

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Upper G.I.

SPECIALIST, LOW COST

	BMAD TECH	BREAK EVEN PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$62.20	293.6	10.00%	75.00%	50.00%	$150,000	$8,277	10
HIGH ANN. PROCEDURES	$62.20	293.6	10.00%	75.00%	50.00%	$150,000	$8,277	10
LOW ANN. PROCEDURES	$62.20	293.6	10.00%	75.00%	50.00%	$150,000	$8,277	10
HIGH COST OF CAPITAL	$62.20	301.1	12.50%	75.00%	50.00%	$150,000	$8,277	10
LOW COST OF CAPITAL	$62.20	286.1	7.50%	75.00%	50.00%	$150,000	$8,277	10
LOW % UTILIZATION	$62.20	218.0	10.00%	75.00%	37.50%	$150,000	$8,277	10
HIGH % UTILIZATION	$62.20	370.6	10.00%	75.00%	62.50%	$150,000	$8,277	10
HIGH % CAP. BORROWED	$62.20	272.3	10.00%	93.75%	50.00%	$150,000	$8,277	10
HIGH EQUIP. PRICE	$62.20	355.3	10.00%	75.00%	50.00%	$187,500	$8,277	10
LOW EQUIP. PRICE	$62.20	231.9	10.00%	75.00%	50.00%	$112,500	$8,277	10
HIGH OP. EXPENSES	$62.20	366.6	10.00%	75.00%	50.00%	$150,000	$10,346	10
LOW OP. EXPENSES	$62.20	236.1	10.00%	75.00%	50.00%	$150,000	$6,208	10
LONG USEFUL LIFE	$62.20	225.1	10.00%	75.00%	50.00%	$150,000	$6,208	12
SHORT USEFUL LIFE	$62.20	335.6	10.00%	75.00%	50.00%	$150,000	$6,208	8

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	Upper G.I.	Specialist?	S
CPT-4 Code(s):	74240	High-end/Low-end:	H

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	506.8	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.50
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	288.00
Annual Maintenance %:	8.00%	Supply Cost/Procedure:	$15.00
Equipment Purchase Price:	$200,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	50%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$62.20	Net Present Value:	$0

1

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$31,520	$31,520	$31,520	$31,520	$31,520	$31,520	$31,520
CASH OUTFLOWS								
2 Equip. purchase & salvage	$50,000	$32,700	$32,700	$32,700	$32,700	$32,700	$0	$0
3 x % utilization	$25,000	$16,350	$16,350	$16,350	$16,350	$16,350	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$4,064	$4,064	$4,064	$4,064	$4,064	$4,064	$4,064
6 supplies	$0	$7,601	$7,601	$7,601	$7,601	$7,601	$7,601	$7,601
7 maintenance	$0	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000
8 overhead	$0	$1,973	$1,973	$1,973	$1,973	$1,973	$1,973	$1,973
9 Total Expenses/Yr.	$25,000	$37,988	$37,988	$37,988	$37,988	$37,988	$21,638	$21,638
10 Taxes Before Depreciation	$0	($2,232)	($2,232)	($2,232)	($2,232)	($2,232)	$3,409	$3,409
11 Depreciation Tax Shield	$0	($1,725)	($1,725)	($1,725)	($1,725)	($7,366)	$0	$0
12 Net Cash Outflow/Yr.	$25,000	$34,032	$34,032	$34,032	$34,032	$28,391	$25,047	$25,047
13 NET CASH FLOW	($25,000)	($2,512)	($2,512)	($2,512)	($2,512)	$3,129	$6,473	$6,473
14 DISCOUNTED CASH FLOW	($25,000)	($2,283)	($2,076)	($1,887)	($1,716)	$1,943	$3,654	$3,321

15 PV of Interest Tax Shield $4,076.02 [See next page for calculation]

16 NET PRESENT VALUE AT P $0
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$15.00
X		
RESOURCE UNITS/PROCEDURE	0.50	1.00
X		
PROCEDURES/YEAR	506.7523	506.7522766
= ANNUAL COST	$4,064	$7,601

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$16,000.00
X		
RESOURCE UNITS/YEAR	288.0	1.0
X		
PERCENTAGE UTILIZATION	50%	50%
= ANNUAL COST	$1,973	$8,000

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	75000.00	4500.00	1552.50	1464.62
Year 2	60000.00	3600.00	1242.00	1105.38
Year 3	45000.00	2700.00	931.50	782.11
Year 4	30000.00	1800.00	621.00	491.89
Year 5	15000.00	900.00	310.50	232.02
SUM				$4,076.02

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: Upper G.I.

SPECIALIST, HIGH COST

	BMAD TECH	BREAK EVEN PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$62.20	506.7	10.00%	75.00%	50.00%	$200,000	$13,772	10
HIGH ANN. PROCEDURES	$62.20	506.8	10.00%	75.00%	50.00%	$200,000	$13,772	10
LOW ANN. PROCEDURES	$62.20	506.8	10.00%	75.00%	50.00%	$200,000	$13,772	10
HIGH COST OF CAPITAL	$62.20	517.5	12.50%	75.00%	50.00%	$200,000	$13,772	10
LOW COST OF CAPITAL	$62.20	496.0	7.50%	75.00%	50.00%	$200,000	$13,772	10
LOW % UTILIZATION	$62.20	376.9	10.00%	75.00%	37.50%	$200,000	$13,772	10
HIGH % UTILIZATION	$62.20	638.7	10.00%	75.00%	62.50%	$200,000	$13,772	10
HIGH % CAP. BORROWED	$62.20	476.1	10.00%	93.75%	50.00%	$200,000	$13,772	10
HIGH EQUIP. PRICE	$62.20	620.9	10.00%	75.00%	50.00%	$250,000	$13,772	10
LOW EQUIP. PRICE	$62.20	392.7	10.00%	75.00%	50.00%	$150,000	$13,772	10
HIGH OP. EXPENSES	$62.20	668.6	10.00%	75.00%	50.00%	$200,000	$17,215	10
LOW OP. EXPENSES	$62.20	386.4	10.00%	75.00%	50.00%	$200,000	$10,329	10
LONG USEFUL LIFE	$62.20	371.0	10.00%	75.00%	50.00%	$200,000	$10,329	13
SHORT USEFUL LIFE	$62.20	525.7	10.00%	75.00%	50.00%	$200,000	$10,329	8

14. C.T. SCAN

14. C.T. SCAN
NORMAL-RETURN PRICES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	C.T. Scan	Specialist?	S
CPT-4 Code(s):	70470	High-end/Low-end:	L

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	1560	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.75
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	600.00
Annual Maintenance %:	7.50%	Supply Cost/Procedure:	$70.00
Equipment Purchase Price	$500,000	Assumed Useful Life (Yrs):	7.00
Assumed % Utilization:	60%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$129.00	Net Present Value:	($0)

1

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$201,244	$201,244	$201,244	$201,244	$201,244	$201,244	$201,244
CASH OUTFLOWS								
2 Equip. purchase & salvage	$125,000	$83,100	$83,100	$83,100	$83,100	$83,100	$0	($50,000)
3 x % utilization	$75,000	$49,860	$49,860	$49,860	$49,860	$49,860	$0	($30,000)
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$18,767	$18,767	$18,767	$18,767	$18,767	$18,767	$18,767
6 supplies	$0	$109,200	$109,200	$109,200	$109,200	$109,200	$109,200	$109,200
7 maintenance	$0	$22,500	$22,500	$22,500	$22,500	$22,500	$22,500	$22,500
8 overhead	$0	$4,932	$4,932	$4,932	$4,932	$4,932	$4,932	$4,932
9 Total Expenses/Yr.	$75,000	$205,259	$205,259	$205,259	$205,259	$205,259	$155,399	$125,399
10 Taxes Before Depreciation	$0	($1,385)	($1,385)	($1,385)	($1,385)	($1,385)	$15,816	$26,166
11 Depreciation Tax Shield	$0	($5,175)	($5,175)	($5,175)	($5,175)	($22,377)	$0	$0
12 Net Cash Outflow/Yr.	$75,000	$198,699	$198,699	$198,699	$198,699	$181,497	$171,215	$151,565
13 NET CASH FLOW	($75,000)	$2,545	$2,545	$2,545	$2,545	$19,747	$30,028	$49,678
14 DISCOUNTED CASH FLOW	($75,000)	$2,314	$2,103	$1,912	$1,738	$12,261	$16,950	$25,493

15 PV of Interest Tax Shield######### [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$70.00
X		
RESOURCE UNITS/PROCEDURE	0.75	1.00
X		
PROCEDURES/YEAR	1560	1560
= ANNUAL COST	$18,767	$109,200

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	*********
X		
RESOURCE UNITS/YEAR	600.0	1.0
X		
PERCENTAGE UTILIZATION	60%	60%
= ANNUAL COST	$4,932	$22,500

Present Value of Interest Tax Shield
(Iine 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	*********	13500.00	4657.50	4393.87
Year 2	*********	10800.00	3726.00	3316.13
Year 3	*********	8100.00	2794.50	2346.32
Year 4	90000.00	5400.00	1863.00	1475.67
Year 5	45000.00	2700.00	931.50	696.07
SUM				*********

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: C.T. Scan

SPECIALIST, LOW COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$129.00	1560	10.00%	75.00%	60.00%	$500,000	$155,399	7
HIGH ANN. PROCEDURES	$119.61	1950	10.00%	75.00%	60.00%	$500,000	$155,399	7
LOW ANN. PROCEDURES	$144.66	1170	10.00%	75.00%	60.00%	$500,000	$155,399	7
HIGH COST OF CAPITAL	$130.65	1560	12.50%	75.00%	60.00%	$500,000	$155,399	7
LOW COST OF CAPITAL	$127.36	1560	7.50%	75.00%	60.00%	$500,000	$155,399	7
LOW % UTILIZATION	$116.84	1560	10.00%	75.00%	45.00%	$500,000	$155,399	7
HIGH % UTILIZATION	$141.44	1560	10.00%	75.00%	75.00%	$500,000	$155,399	7
HIGH % CAP. BORROWED	$125.72	1560	10.00%	93.75%	60.00%	$500,000	$155,399	7
HIGH EQUIP. PRICE	$139.96	1560	10.00%	75.00%	60.00%	$625,000	$155,399	7
LOW EQUIP. PRICE	$118.05	1560	10.00%	75.00%	60.00%	$375,000	$155,399	7
HIGH OP. EXPENSES	$153.91	1560	10.00%	75.00%	60.00%	$500,000	$194,249	7
LOW OP. EXPENSES	$104.10	1560	10.00%	75.00%	60.00%	$500,000	$116,549	7
LONG USEFUL LIFE	$128.03	1560	10.00%	75.00%	60.00%	$500,000	$116,549	9
SHORT USEFUL LIFE	$139.96	1560	10.00%	75.00%	60.00%	$500,000	$116,549	5

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	C.T. Scan	Specialist?	S
CPT-4 Code(s):	70470	High-end/Low-end:	H

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	1000	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.75
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	600.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$85.00
Equipment Purchase Price	$800,000	Assumed Useful Life (Yrs):	7.00
Assumed % Utilization:	60%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price	$223.772	Net Present Value:	($0)

1

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$223,772	$223,772	$223,772	$223,772	$223,772	$223,772	$223,772
CASH OUTFLOWS								
2 Equip. purchase & salvage	$200,000	$124,166	$124,166	$124,166	$124,166	$124,166	$0	($80,000)
3 x % utilization	$120,000	$74,499	$74,499	$74,499	$74,499	$74,499	$0	($48,000)
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$12,030	$12,030	$12,030	$12,030	$12,030	$12,030	$12,030
6 supplies	$0	$85,000	$85,000	$85,000	$85,000	$85,000	$85,000	$85,000
7 maintenance	$0	$48,000	$48,000	$48,000	$48,000	$48,000	$48,000	$48,000
8 overhead	$0	$4,932	$4,932	$4,932	$4,932	$4,932	$4,932	$4,932
9 Total Expenses/Yr.	$120,000	$224,461	$224,461	$224,461	$224,461	$224,461	$149,962	$101,962
10 Taxes Before Depreciation	$0	($238)	($238)	($238)	($238)	($238)	$25,464	$42,024
11 Depreciation Tax Shield	$0	($8,280)	($8,280)	($8,280)	($8,280)	($33,982)	$0	$0
12 Net Cash Outflow/Yr.	$120,000	$215,943	$215,943	$215,943	$215,943	$190,241	$175,426	$143,986
13 NET CASH FLOW	#########	$7,828	$7,828	$7,828	$7,828	$33,530	$48,345	$79,785
14 DISCOUNTED CASH FLOW	#########	$7,116	$6,470	$5,881	$5,347	$20,820	$27,290	$40,942
15 PV of Interest Tax Shield	#########	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$85.00
X		
RESOURCE UNITS/PROCEDURE	0.75	1.00
X		
PROCEDURES/YEAR	1000	1000
= ANNUAL COST	$12,030	$85,000

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	**********
X		
RESOURCE UNITS/YEAR	600.0	1.0
X		
PERCENTAGE UTILIZATION	60%	60%
= ANNUAL COST	$4,932	$48,000

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	90000.00	5400.00	1863.00	1757.55
Year 2	77142.86	4628.57	1596.86	1421.20
Year 3	64285.71	3857.14	1330.71	1117.29
Year 4	51428.57	3085.71	1064.57	843.24
Year 5	38571.43	2314.29	798.43	596.63
Year 6	25714.29	1542.86	532.29	397.75
Year 7	0.00	0.00	0.00	0.00
SUM				$6,133.67

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: C.T. SCAN

SPECIALIST, HIGH COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$223.772	1000	10.00%	75.00%	60.00%	$800,000	$187,453	7
HIGH ANN. PROCEDURES	$198.423	1250	10.00%	75.00%	60.00%	$800,000	$187,453	7
LOW ANN. PROCEDURES	$266.019	750	10.00%	75.00%	60.00%	$800,000	$187,453	7
HIGH COST OF CAPITAL	$228.156	1000	12.50%	75.00%	60.00%	$800,000	$187,453	7
LOW COST OF CAPITAL	$219.412	1000	7.50%	75.00%	60.00%	$800,000	$187,453	7
LOW % UTILIZATION	$191.753	1000	10.00%	75.00%	45.00%	$800,000	$187,453	7
HIGH % UTILIZATION	$256.013	1000	10.00%	75.00%	75.00%	$800,000	$187,453	7
HIGH % CAP. BORROWED	$215.837	1000	10.00%	93.75%	60.00%	$800,000	$187,453	7
HIGH EQUIP. PRICE	$254.224	1000	10.00%	75.00%	60.00%	*********	$187,453	7
LOW EQUIP. PRICE	$193.319	1000	10.00%	75.00%	60.00%	$600,000	$187,453	7
HIGH OP. EXPENSES	$261.260	1000	10.00%	75.00%	60.00%	$800,000	$234,316	7
LOW OP. EXPENSES	$223.772	1000	10.00%	75.00%	60.00%	$800,000	$140,589	7
LONG USEFUL LIFE	$221.313	1000	10.00%	75.00%	60.00%	$800,000	$140,589	9
SHORT USEFUL LIFE	$251.246	1000	10.00%	75.00%	60.00%	$800,000	$140,589	5

14. C.T. SCAN
NORMAL-RETURN VOLUMES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	C.T. Scan	Specialist?	S
CPT-4 Code(s):	70470	High-end/Low-end:	L

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	503.2	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.75
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	600.00
Annual Maintenance %:	7.50%	Supply Cost/Procedure:	$70.00
Equipment Purchase Price:	$500,000	Assumed Useful Life (Yrs):	7.00
Assumed % Utilization:	60%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$227.65	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$114,555	$114,555	$114,555	$114,555	$114,555	$114,555	$114,555
CASH OUTFLOWS								
2 Equip. purchase & salvage	$125,000	$83,100	$83,100	$83,100	$83,100	$83,100	$0	($50,000)
3 x % utilization	$75,000	$49,860	$49,860	$49,860	$49,860	$49,860	$0	($30,000)
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$6,054	$6,054	$6,054	$6,054	$6,054	$6,054	$6,054
6 supplies	$0	$35,224	$35,224	$35,224	$35,224	$35,224	$35,224	$35,224
7 maintenance	$0	$22,500	$22,500	$22,500	$22,500	$22,500	$22,500	$22,500
8 overhead	$0	$4,932	$4,932	$4,932	$4,932	$4,932	$4,932	$4,932
9 Total Expenses/Yr.	$75,000	$118,570	$118,570	$118,570	$118,570	$118,570	$68,710	$38,710
10 Taxes Before Depreciation	$0	($1,385)	($1,385)	($1,385)	($1,385)	($1,385)	$15,816	$26,166
11 Depreciation Tax Shield	$0	($5,175)	($5,175)	($5,175)	($5,175)	($22,377)	$0	$0
12 Net Cash Outflow/Yr.	$75,000	$112,010	$112,010	$112,010	$112,010	$94,808	$84,526	$64,876
13 NET CASH FLOW	($75,000)	$2,545	$2,545	$2,545	$2,545	$19,747	$30,028	$49,678
14 DISCOUNTED CASH FLOW	($75,000)	$2,314	$2,103	$1,912	$1,738	$12,261	$16,950	$25,493
15 PV of Interest Tax Shield	$12,228.05	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$70.00
X		
RESOURCE UNITS/PROCEDURE	0.75	1.00
X		
PROCEDURES/YEAR	503.2056	503.2056295
= ANNUAL COST	$6,054	$35,224

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$37,500.00
X		
RESOURCE UNITS/YEAR	600.0	1.0
X		
PERCENTAGE UTILIZATION	60%	60%
= ANNUAL COST	$4,932	$22,500

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	225000.00	13500.00	4657.50	4393.87
Year 2	180000.00	10800.00	3726.00	3316.13
Year 3	135000.00	8100.00	2794.50	2346.32
Year 4	90000.00	5400.00	1863.00	1475.67
Year 5	45000.00	2700.00	931.50	696.07
SUM				$12,228.05

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: C.T. Scan

SPECIALIST, LOW COST

	BMAD TECH	BREAK EVEN PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$227.65	503.2	10.00%	75.00%	60.00%	$500,000	$40,970	7
HIGH ANN. PROCEDURES	$227.65	503.2	10.00%	75.00%	60.00%	$500,000	$40,970	7
LOW ANN. PROCEDURES	$227.65	503.2	10.00%	75.00%	60.00%	$500,000	$40,970	7
HIGH COST OF CAPITAL	$227.65	520.9	12.50%	75.00%	60.00%	$500,000	$40,970	7
LOW COST OF CAPITAL	$227.65	485.6	7.50%	75.00%	60.00%	$500,000	$40,970	7
LOW % UTILIZATION	$227.65	373.0	10.00%	75.00%	45.00%	$500,000	$40,970	7
HIGH % UTILIZATION	$227.65	636.4	10.00%	75.00%	75.00%	$500,000	$40,970	7
HIGH % CAP. BORROWED	$227.65	468.1	10.00%	93.75%	60.00%	$500,000	$40,970	7
HIGH EQUIP. PRICE	$227.65	620.5	10.00%	75.00%	60.00%	$625,000	$40,970	7
LOW EQUIP. PRICE	$227.65	385.9	10.00%	75.00%	60.00%	$375,000	$40,970	7
HIGH OP. EXPENSES	$227.65	640.5	10.00%	75.00%	60.00%	$500,000	$51,212	7
LOW OP. EXPENSES	$227.65	399.8	10.00%	75.00%	60.00%	$500,000	$30,727	7
LONG USEFUL LIFE	$227.65	399.8	10.00%	75.00%	60.00%	$500,000	$30,727	7
SHORT USEFUL LIFE	$227.65	399.8	10.00%	75.00%	60.00%	$500,000	$30,727	7

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	C.T. Scan	Specialist?	S
CPT-4 Code(s):	70470	High-end/Low-end:	H

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	966.8	Marginal Tax Rate:	34.5%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.75
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	600.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$85.00
Equipment Purchase Price:	$800,000	Assumed Useful Life (Yrs):	7.00
Assumed % Utilization:	60%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$227.65	Net Present Value:	($0)

	1 Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$220,092	$220,092	$220,092	$220,092	$220,092	$220,092	$220,092
CASH OUTFLOWS								
2 Equip. purchase & salvage	$200,000	$132,960	$132,960	$132,960	$132,960	$132,960	$0	($80,000)
3 x % utilization	$120,000	$79,776	$79,776	$79,776	$79,776	$79,776	$0	($48,000)
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$11,631	$11,631	$11,631	$11,631	$11,631	$11,631	$11,631
6 supplies	$0	$82,178	$82,178	$82,178	$82,178	$82,178	$82,178	$82,178
7 maintenance	$0	$48,000	$48,000	$48,000	$48,000	$48,000	$48,000	$48,000
8 overhead	$0	$4,932	$4,932	$4,932	$4,932	$4,932	$4,932	$4,932
9 Total Expenses/Yr.	$120,000	$226,517	$226,517	$226,517	$226,517	$226,517	$146,741	$98,741
10 Taxes Before Depreciation	$0	($2,216)	($2,216)	($2,216)	($2,216)	($2,216)	$25,306	$41,866
11 Depreciation Tax Shield	$0	($8,280)	($8,280)	($8,280)	($8,280)	($35,803)	$0	$0
12 Net Cash Outflow/Yr.	$120,000	$216,020	$216,020	$216,020	$216,020	$188,498	$172,047	$140,607
13 NET CASH FLOW	($120,000)	$4,072	$4,072	$4,072	$4,072	$31,595	$48,045	$79,485
14 DISCOUNTED CASH FLOW	($120,000)	$3,702	$3,365	$3,059	$2,781	$19,618	$27,120	$40,789

15 PV of Interest Tax Shield $19,564.88 [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$85.00
X		
RESOURCE UNITS/PROCEDURE	0.75	1.00
X		
PROCEDURES/YEAR	966.8021	966.8020562
= ANNUAL COST	$11,631	$82,178

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$80,000.00
X		
RESOURCE UNITS/YEAR	600.0	1.0
X		
PERCENTAGE UTILIZATION	60%	60%
= ANNUAL COST	$4,932	$48,000

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	360000.00	21600.00	7452.00	7030.19
Year 2	288000.00	17280.00	5961.60	5305.80
Year 3	216000.00	12960.00	4471.20	3754.11
Year 4	144000.00	8640.00	2980.80	2361.07
Year 5	72000.00	4320.00	1490.40	1113.71
SUM				$19,564.88

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as riskv as the interest payments generating them.

SENSITIVITY ANALYSIS: C.T. Scan

SPECIALIST, HIGH COST

	BMAD TECH	BREAK EVEN PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$227.65	966.8	10.00%	75.00%	60.00%	$800,000	$68,945	7
HIGH ANN. PROCEDURES	$227.65	966.8	10.00%	75.00%	60.00%	$800,000	$68,945	7
LOW ANN. PROCEDURES	$227.65	966.8	10.00%	75.00%	60.00%	$800,000	$68,945	7
HIGH COST OF CAPITAL	$227.65	998.3	12.50%	75.00%	60.00%	$800,000	$68,945	7
LOW COST OF CAPITAL	$227.65	935.4	7.50%	75.00%	60.00%	$800,000	$68,945	7
LOW % UTILIZATION	$227.65	717.2	10.00%	75.00%	45.00%	$800,000	$68,945	7
HIGH % UTILIZATION	$227.65	1221.7	10.00%	75.00%	75.00%	$800,000	$68,945	7
HIGH % CAP. BORROWED	$227.65	904.1	10.00%	93.75%	60.00%	$800,000	$68,945	7
HIGH EQUIP. PRICE	$227.65	1199.1	10.00%	75.00%	60.00%	########	$68,945	7
LOW EQUIP. PRICE	$227.65	734.5	10.00%	75.00%	60.00%	$600,000	$68,945	7
HIGH OP. EXPENSES	$227.65	1311.7	10.00%	75.00%	60.00%	$800,000	$86,181	7
LOW OP. EXPENSES	$227.65	729.9	10.00%	75.00%	60.00%	$800,000	$51,709	7
LONG USEFUL LIFE	$227.65	714.3	10.00%	75.00%	60.00%	$800,000	$51,709	9
SHORT USEFUL LIFE	$227.65	906.5	10.00%	75.00%	60.00%	$800,000	$51,709	5

15. HOLTER TAPE RECORDING

15. HOLTER TAPE RECORDING
NORMAL-RETURN PRICES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	HOLT TAPE REC.	Specialist?	No
CPT-4 Code(s):	93662 (090020)	High-end/Low-end:	Low

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	150	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$12.25	Personnel Time/Procedure:	0.75
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	0.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$0.00
Equipment Purchase Price:	$1,000	Assumed Useful Life (Years):	8.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$19.75	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$2,963	$2,963	$2,963	$2,963	$2,963	$2,963	$2,963
CASH OUTFLOWS								
2 Equip. purchase & salvage	$1,000	$0	$0	$0	$0	$0	$0	$0
3 x % utilization	$1,000	$0	$0	$0	$0	$0	$0	$0
4 Marginal Oc. Expenses/Yr.								
5 technician	$0	$1,153	$1,153	$1,153	$1,153	$1,153	$1,153	$1,153
6 supplies	$0	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500
7 maintenance	$0	$50	$50	$50	$50	$50	$50	$50
8 overhead	$0	$0	$0	$0	$0	$0	$0	$0
9 Total Expenses/Yr.	$1,000	$2,703	$2,703	$2,703	$2,703	$2,703	$2,703	$2,703
10 Taxes Before Depreciation	$0	$69	$69	$69	$69	$69	$69	$69
11 Depreciation Tax Shield	$0	($69)	($69)	($69)	($69)	($69)	$0	$0
12 Net Cash Outflow/Yr.	$1,000	$2,703	$2,703	$2,703	$2,703	$2,703	$2,772	$2,772
13 NET CASH FLOW	($1,000)	$200	$200	$200	$200	$200	$131	$131
14 DISCOUNTED CASH FLOW	($1,000)	$182	$165	$150	$137	$124	$74	$67

15 PV of Interest Tax Shield $0.00 [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
CASH INFLOWS							
1 Revenue From Test	$2,903	$0	$0	$0	$0	$0	$0
CASH OUTFLOWS							
2 Equip. purchase & salvage	($100)	$0	$0	$0	$0	$0	$0
3 x % utilization	($100)	$0	$0	$0	$0	$0	$0
4 Marginal Op. Expenses/Yr.							
5 technician	$1,153	$0	$0	$0	$0	$0	$0
6 supplies	$1,500	$0	$0	$0	$0	$0	$0
7 maintenance	$50	$0	$0	$0	$0	$0	$0
8 overhead	$0	$0	$0	$0	$0	$0	$0
9 Total Expenses/Yr.	$2,603	$0	$0	$0	$0	$0	$0
10 Taxes Before Depreciation	$103	$0	$0	$0	$0	$0	$0
11 Depreciation Tax Shield	$0	$0	$0	$0	$0	$0	$0
12 Net Cash Outflow/Yr.	$2,707	$0	$0	$0	$0	$0	$0
13 NET CASH FLOW	$196	$0	$0	$0	$0	$0	$0
14 DISCOUNTED CASH FLOW	$101	$0	$0	$0	$0	$0	$0

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$10.00
x		
RESOURCE UNITS/PROCEDURE	0.75	1.00
x		
PROCEDURES/YEAR	150	150
= ANNUAL COST	$1,153	$1,500

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$50
x		
RESOURCE UNITS/YEAR	0.0	1.0
x		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$0	$50

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: HOLT TAPE REC.

Non-Specialist Low-Cost

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$19.35	150	10.00%	0.00%	100.00%	$1,000	$2,703	8
HIGH ANN. PROCEDURES	$19.02	187.5	10.00%	0.00%	100.00%	$1,000	$2,703	8
LOW ANN. PROCEDURES	$19.92	112.5	10.00%	0.00%	100.00%	$1,000	$2,703	8
HIGH COST OF CAPITAL	$19.52	150	12.50%	0.00%	100.00%	$1,000	$2,703	8
LOW COST OF CAPITAL	$19.20	150	7.50%	0.00%	100.00%	$1,000	$2,703	8
LOW % UTILIZATION	$18.94	150	10.00%	0.00%	75.00%	$1,000	$2,703	8
HIGH % UTILIZATION	$19.35	150	10.00%	0.00%	100.00%	$1,000	$2,703	8
HIGH % CAP. BORROWED	$19.24	150	10.00%	25.00%	100.00%	$1,000	$2,703	8
HIGH EQUIP. PRICE	$19.77	150	10.00%	0.00%	100.00%	$1,250	$2,703	8
LOW EQUIP. PRICE	$18.93	150	10.00%	0.00%	100.00%	$750	$2,703	8
HIGH OP. EXPENSES	$23.86	150	10.00%	0.00%	100.00%	$1,000	$3,379	8
LOW OP. EXPENSES	$14.85	150	10.00%	0.00%	100.00%	$1,000	$2,027	8
LONG USEFUL LIFE	$19.17	150	10.00%	0.00%	100.00%	$1,000	$2,703	10
SHORT USEFUL LIFE	$19.65	150	10.00%	0.00%	100.00%	$1,000	$2,703	6

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	HOLT TAPE REC.	Specialist:	No
CPT-4 Code(s):	93252 (90020)	High-end/Low-end:	High

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	50	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	0.75
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	0.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$10.00
Equipment Purchase Price:	$1,200	Assumed Useful Life (Yrs):	6.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	5%
Technical Component Price:	$25.99	Net Present Value:	$0

		Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
	CASH INFLOWS								
1	Revenue From Test	$0	$1,300	$1,300	$1,300	$1,300	$1,300	$1,300	$0
	CASH OUTFLOWS								
2	Equip. purchase & salvage	$1,200	$0	$0	$0	$0	$0	($120)	$0
3	x % utilization	$1,200	$0	$0	$0	$0	$0	($120)	$0
4	Marginal Op. Expenses/Yr.								
5	technician	$0	$384	$384	$384	$384	$384	$384	$0
6	supplies	$0	$500	$500	$500	$500	$500	$500	$0
7	maintenance	$0	$120	$120	$120	$120	$120	$120	$0
8	overhead	$0	$0	$0	$0	$0	$0	$0	$0
9	Total Expenses/Yr.	$1,200	$1,004	$1,004	$1,004	$1,004	$1,004	$884	$0
10	Taxes Before Depreciation	$0	$102	$102	$102	$102	$102	$143	$0
11	Depreciation Tax Shield	$0	($83)	($83)	($83)	($83)	($83)	$0	$0
12	Net Cash Outflow/Yr.	$1,200	$1,023	$1,023	$1,023	$1,023	$1,023	$1,028	$0
13	NET CASH FLOW	($1,200)	$276	$276	$276	$276	$276	$272	$0
14	DISCOUNTED CASH FLOW	($1,200)	$251	$228	$207	$189	$171	$153	$0
15	PV of Interest Tax Shield	$0.00 [See next page for calculation]							
16	NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$10.00
X		
RESOURCE UNITS/PROCEDURE	3.75	1.00
X		
PROCEDURES/YEAR	50	50
= ANNUAL COST	$384	$500

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$120
X		
RESOURCE UNITS/YEAR	0.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$0	$120

Present value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	HOLT TAPE REC.	Specialist?	Yes
CPT-4 Code(s):	93262 (00020)	High-end/Low-end:	Low

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	250	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.75
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	0.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$9.00
Equipment Purchase Price:	$1,800	Assumed Useful Life (Yrs):	8.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$22.83	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$5,708	$5,708	$5,708	$5,708	$5,708	$5,708	$5,708
CASH OUTFLOWS								
2 Equip. purchase & salvage	$1,800	$0	$0	$0	$0	$0	$0	$0
3 x % utilization	$1,800	$0	$0	$0	$0	$0	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$3,008	$3,008	$3,008	$3,008	$3,008	$3,008	$3,008
6 supplies	$0	$2,250	$2,250	$2,250	$2,250	$2,250	$2,250	$2,250
7 maintenance	$0	$90	$90	$90	$90	$90	$90	$90
8 overhead	$0	$0	$0	$0	$0	$0	$0	$0
9 Total Expenses/Yr.	$1,800	$5,348	$5,348	$5,348	$5,348	$5,348	$5,348	$5,348
10 Taxes Before Depreciation	$0	$124	$124	$124	$124	$124	$124	$124
11 Depreciation Tax Shield	$0	($124)	($124)	($124)	($124)	($124)	$0	$0
12 Net Cash Outflow/Yr.	$1,800	$5,348	$5,348	$5,348	$5,348	$5,348	$5,472	$5,472
13 NET CASH FLOW	($1,800)	$360	$360	$360	$360	$360	$236	$236
14 DISCOUNTED CASH FLOW	($1,800)	$327	$298	$270	$246	$224	$133	$121
15 PV of Interest Tax Shield	$0.00	[See next page for calculation]						
16 NET PRESENT VALUE OF P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$9.00
X		
RESOURCE UNITS/PROCEDURE	0.75	1.00
X		
PROCEDURES/YEAR	250	250
= ANNUAL COST	$3,008	$2,250

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$17.70	$90
X		
RESOURCE UNITS/YEAR	0.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$0	$90

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology: HOLT TAPE REC. Specialist? Yes
CPT-4 Code(s): 93262 (00020) High-end/Low-end: High

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	180	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.75
Annual Overhead/Square Ft:	$12.70	Required Square Feet:	0.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$11.00
Equipment Purchase Price:	$2,100	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$27.07	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$4,872	$4,872	$4,872	$4,872	$4,872	$4,872	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$2,100	$0	$0	$0	$0	$0	($210)	$0
3 * % utilization	$2,100	$0	$0	$0	$0	$0	($210)	$0
4 Marginal Oc. Expenses/Yr.								
5 technician	$0	$2,165	$2,165	$2,165	$2,165	$2,165	$2,165	$0
6 supplies	$0	$1,980	$1,980	$1,980	$1,980	$1,980	$1,980	$0
7 maintenance	$0	$210	$210	$210	$210	$210	$210	$0
8 overhead	$0	$0	$0	$0	$0	$0	$0	$0
9 Total Expenses/Yr.	$2,100	$4,355	$4,355	$4,355	$4,355	$4,355	$4,145	$0
10 Taxes Before Depreciation	$0	$178	$178	$178	$178	$178	$251	$0
11 Depreciation Tax Shield	$0	($145)	($145)	($145)	($145)	($145)	$0	$0
12 Net Cash Outflow/Yr.	$2,100	$4,389	$4,389	$4,389	$4,389	$4,389	$4,396	$0
13 NET CASH FLOW	($2,100)	$483	$483	$483	$483	$483	$476	$0
14 DISCOUNTED CASH FLOW	($2,100)	$439	$399	$363	$330	$300	$269	$0

15 PV of Interest Tax Shield $0.00 [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$1.00
X		
RESOURCE UNITS/PROCEDURE	0.75	1.00
X		
PROCEDURES/YEAR	180	180
= ANNUAL COST	$2,165	$1,980

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$10.70	$210
X		
RESOURCE UNITS/YEAR	0.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$0	$210

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: HOLT TAPE REC.

Specialist High-Cost

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$27.07	180	10.00%	0.00%	100.00%	$2,100	$4,355	6
HIGH ANN. PROCEDURES	$26.25	225	10.00%	0.00%	100.00%	$2,100	$4,355	6
LOW ANN. PROCEDURES	$28.40	135	10.00%	0.00%	100.00%	$2,100	$4,355	6
HIGH COST OF CAPITAL	$27.35	180	12.50%	0.00%	100.00%	$2,100	$4,355	6
LOW COST OF CAPITAL	$26.77	180	7.50%	0.00%	100.00%	$2,100	$4,355	6
LOW % UTILIZATION	$26.05	180	10.00%	0.00%	75.00%	$2,100	$4,355	6
HIGH % UTILIZATION	$27.07	180	10.00%	0.00%	100.00%	$2,100	$4,355	6
HIGH % CAP. BORROWED	$26.80	180	10.00%	25.00%	100.00%	$2,100	$4,355	6
HIGH EQUIP. PRICE	$28.08	180	10.00%	0.00%	100.00%	$2,625	$4,355	6
LOW EQUIP. PRICE	$26.06	180	10.00%	0.00%	100.00%	$1,575	$4,355	6
HIGH OP. EXPENSES	$33.10	180	10.00%	0.00%	100.00%	$2,100	$5,444	6
LOW OP. EXPENSES	$21.02	180	10.00%	0.00%	100.00%	$2,100	$3,267	6
LONG USEFUL LIFE	$26.56	180	10.00%	0.00%	100.00%	$2,100	$4,355	8
SHORT USEFUL LIFE	$27.59	180	10.00%	0.00%	100.00%	$2,100	$4,355	5

15. HOLTER TAPE RECORDING
NORMAL-RETURN VOLUMES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	HOLTER RECORDING	Specialist?	No
CPT-4 Code(s):	93262 (Q0020)	High-end/Low-end:	Low

INPUT DATA AND ASSUMPTIONS

Break-Even Procedures/Yr:	7	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	0.75
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	0.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$10.00
Equipment Purchase Price:	$1,000	Assumed Useful Life (Yrs):	8.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Medicare Mean Prevailing:	$54.55	Net Present Value:	($0)

		Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
	CASH INFLOWS								
1	Revenue From Test	$0	$370	$370	$370	$370	$370	$370	$370
	CASH OUTFLOWS								
2	Equip. purchase & salvage	$1,000	$0	$0	$0	$0	$0	$0	$0
3	x % utilization	$1,000	$0	$0	$0	$0	$0	$0	$0
4	Marginal Op. Expenses/Yr.								
5	technician	$0	$52	$52	$52	$52	$52	$52	$52
6	supplies	$0	$68	$68	$68	$68	$68	$68	$68
7	maintenance	$0	$50	$50	$50	$50	$50	$50	$50
8	overhead	$0	$0	$0	$0	$0	$0	$0	$0
9	Total Expenses/Yr.	$1,000	$170	$170	$170	$170	$170	$170	$170
10	Taxes Before Depreciation	$0	$69	$69	$69	$69	$69	$69	$69
11	Depreciation Tax Shield	$0	($69)	($69)	($69)	($69)	($69)	$0	$0
12	Net Cash Outflow/Yr.	$1,000	$170	$170	$170	$170	$170	$239	$239
13	NET CASH FLOW	($1,000)	$200	$200	$200	$200	$200	$131	$131
14	DISCOUNTED CASH FLOW	($1,000)	$182	$165	$150	$137	$124	$74	$67
15	PV of Interest Tax Shield	$0.00 [See next page for calculation]							
16	NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$10.00
X		
RESOURCE UNITS/PROCEDURE	0.75	1.00
X		
PROCEDURES/YEAR	6.78	6.78
= ANNUAL COST	$52	$68

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$50
X		
RESOURCE UNITS/YEAR	0.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$0	$50

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: HOLTER RECORDING

NON-SPECIALIST, LOW COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$27.07	6.78	10.00%	0.00%	100.00%	$1,000	$170	8
HIGH ANN. PROCEDURES	$26.25	8.475	10.00%	0.00%	100.00%	$1,000	$170	8
LOW ANN. PROCEDURES	$28.40	5.085	10.00%	0.00%	100.00%	$1,000	$170	8
HIGH COST OF CAPITAL	$27.35	6.78	12.50%	0.00%	100.00%	$1,000	$170	8
LOW COST OF CAPITAL	$26.77	6.78	7.50%	0.00%	100.00%	$1,000	$170	8
LOW % UTILIZATION	$26.05	6.78	10.00%	0.00%	75.00%	$1,000	$170	8
HIGH % UTILIZATION	$27.07	6.78	10.00%	0.00%	100.00%	$1,000	$170	8
HIGH % CAP. BORROWED	$26.80	6.78	10.00%	25.00%	100.00%	$1,000	$170	8
HIGH EQUIP. PRICE	$28.08	6.78	10.00%	0.00%	100.00%	$1,250	$170	8
LOW EQUIP. PRICE	$26.06	6.78	10.00%	0.00%	100.00%	$750	$170	8
HIGH OP. EXPENSES	$33.10	6.78	10.00%	0.00%	100.00%	$1,000	$212	8
LOW OP. EXPENSES	$21.02	6.78	10.00%	0.00%	100.00%	$1,000	$127	8
LONG USEFUL LIFE	$26.56	6.78	10.00%	0.00%	100.00%	$1,000	$170	10
SHORT USEFUL LIFE	$27.59	6.78	10.00%	0.00%	100.00%	$1,000	$170	6

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	HOLT TAPE REC.	Specialist?	No
CPT-4 Code(s):	93262 (Q0020)	High-end/Low-end:	High

INPUT DATA AND ASSUMPTIONS

Break-Even Procedures/Yr:	11	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	0.75
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	0.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$10.00
Equipment Purchase Price:	$1,200	Assumed Useful Life (Yrs):	6.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Medicare Mean Prevailing:	$54.55	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$614	$614	$614	$614	$614	$614	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$1,200	$0	$0	$0	$0	$0	($120)	$0
3 x % utilization	$1,200	$0	$0	$0	$0	$0	($120)	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$87	$87	$87	$87	$87	$87	$0
6 supplies	$0	$113	$113	$113	$113	$113	$113	$0
7 maintenance	$0	$120	$120	$120	$120	$120	$120	$0
8 overhead	$0	$0	$0	$0	$0	$0	$0	$0
9 Total Expenses/Yr.	$1,200	$319	$319	$319	$319	$319	$199	$0
10 Taxes Before Depreciation	$0	$102	$102	$102	$102	$102	$143	$0
11 Depreciation Tax Shield	$0	($83)	($83)	($83)	($83)	($83)	$0	$0
12 Net Cash Outflow/Yr.	$1,200	$338	$338	$338	$338	$338	$342	$0
13 NET CASH FLOW	($1,200)	$276	$276	$276	$276	$276	$272	$0
14 DISCOUNTED CASH FLOW	($1,200)	$251	$228	$207	$189	$171	$153	$0
15 PV of Interest Tax Shield	$0.00 (See next page for calculation)							
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$10.00
X		
RESOURCE UNITS/PROCEDURE	0.75	1.00
X		
PROCEDURES/YEAR	11.26	11.26
= ANNUAL COST	$87	$113

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$120
X		
RESOURCE UNITS/YEAR	0.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$0	$120

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	HOLTER RECORDING	Specialist?	Yes
CPT-4 Code(s):	93262 (00020)	High-end/Low-end:	Low

INPUT DATA AND ASSUMPTIONS

Break-Even Procedures/Yr:	13	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.75
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	0.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$9.00
Equipment Purchase Price:	$1,800	Assumed Useful Life (Yrs):	8.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Medicare Mean Prevailing:	$54.55	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$732	$732	$732	$732	$732	$732	$732
CASH OUTFLOWS								
2 Equip. purchase & salvage	$1,800	$0	$0	$0	$0	$0	$0	$0
3 x % utilization	$1,800	$0	$0	$0	$0	$0	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$161	$161	$161	$161	$161	$161	$161
6 supplies	$0	$121	$121	$121	$121	$121	$121	$121
7 maintenance	$0	$90	$90	$90	$90	$90	$90	$90
8 overhead	$0	$0	$0	$0	$0	$0	$0	$0
9 Total Expenses/Yr.	$1,800	$372	$372	$372	$372	$372	$372	$372
10 Taxes Before Depreciation	$0	$124	$124	$124	$124	$124	$124	$124
11 Depreciation Tax Shield	$0	($124)	($124)	($124)	($124)	($124)	$0	$0
12 Net Cash Outflow/Yr.	$1,800	$372	$372	$372	$372	$372	$496	$496
13 NET CASH FLOW	($1,800)	$360	$360	$360	$360	$360	$236	$236
14 DISCOUNTED CASH FLOW	($1,800)	$327	$297	$270	$246	$223	$133	$121
15 PV of Interest Tax Shield	$0.00 [See next page for calculation]							
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$9.00
X		
RESOURCE UNITS/PROCEDURE	0.75	1.00
X		
PROCEDURES/YEAR	13.42	13.42
= ANNUAL COST	$161	$121

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$90
X		
RESOURCE UNITS/YEAR	0.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$0	$90

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	HOLTER RECORDING	Specialist?	Yes
CPT-4 Code(s):	93262 (00020)	High-end/Low-end:	High

INPUT DATA AND ASSUMPTIONS

Break-Even Procedures/Yr:	23	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.75
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	0.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$11.00
Equipment Purchase Price:	$2,100	Assumed Useful Life (Yrs):	6.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Medicare Mean Prevailing:	$54.55	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$1,257	$1,257	$1,257	$1,257	$1,257	$1,257	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$2,100	$0	$0	$0	$0	$0	($210)	$0
3 x % utilization	$2,100	$0	$0	$0	$0	$0	($210)	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$277	$277	$277	$277	$277	$277	$0
6 supplies	$0	$254	$254	$254	$254	$254	$254	$0
7 maintenance	$0	$210	$210	$210	$210	$210	$210	$0
8 overhead	$0	$0	$0	$0	$0	$0	$0	$0
9 Total Expenses/Yr.	$2,100	$741	$741	$741	$741	$741	$531	$0
10 Taxes Before Depreciation	$0	$178	$178	$178	$178	$178	$251	$0
11 Depreciation Tax Shield	$0	($145)	($145)	($145)	($145)	($145)	$0	$0
12 Net Cash Outflow/Yr.	$2,100	$774	$774	$774	$774	$774	$781	$0
13 NET CASH FLOW	($2,100)	$483	$483	$483	$483	$483	$476	$0
14 DISCOUNTED CASH FLOW	($2,100)	$439	$399	$363	$330	$300	$269	$0
15 PV of Interest Tax Shield	$0.00 [See next page for calculation]							
16 NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$11.00
X		
RESOURCE UNITS/PROCEDURE	0.75	1.00
X		
PROCEDURES/YEAR	23.05	23.05
= ANNUAL COST	$277	$254

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$210
X		
RESOURCE UNITS/YEAR	0.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$0	$210

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: HOLTER RECORDING

SPECIALIST, HIGH COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$27.07	23.05	10.00%	0.00%	100.00%	$2,100	$741	6
HIGH ANN. PROCEDURES	$26.25	28.8125	10.00%	0.00%	100.00%	$2,100	$741	6
LOW ANN. PROCEDURES	$28.40	17.2875	10.00%	0.00%	100.00%	$2,100	$741	6
HIGH COST OF CAPITAL	$27.35	23.05	12.50%	0.00%	100.00%	$2,100	$741	6
LOW COST OF CAPITAL	$26.77	23.05	7.50%	0.00%	100.00%	$2,100	$741	6
LOW % UTILIZATION	$26.05	23.05	10.00%	0.00%	75.00%	$2,100	$741	6
HIGH % UTILIZATION	$27.07	23.05	10.00%	0.00%	100.00%	$2,100	$741	6
HIGH % CAP. BORROWED	$26.80	23.05	10.00%	25.00%	100.00%	$2,100	$741	6
HIGH EQUIP. PRICE	$28.08	23.05	10.00%	0.00%	100.00%	$2,625	$741	6
LOW EQUIP. PRICE	$26.06	23.05	10.00%	0.00%	100.00%	$1,575	$741	6
HIGH OP. EXPENSES	$33.10	23.05	10.00%	0.00%	100.00%	$2,100	$926	6
LOW OP. EXPENSES	$21.02	23.05	10.00%	0.00%	100.00%	$2,100	$556	6
LONG USEFUL LIFE	$26.56	23.05	10.00%	0.00%	100.00%	$2,100	$741	8
SHORT USEFUL LIFE	$27.59	23.05	10.00%	0.00%	100.00%	$2,100	$741	5

16. HOLTER SCANNING

16. HOLTER SCANNING
NORMAL-RETURN PRICES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONL

Diagnostic Technology:	HOLTER SCANNING	Specialist?	No
CPT-4 Code(s):	93262 (90021)	High-end/Low-end:	Low

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	500	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	1.00
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	8.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$2.00
Equipment Purchase Price:	$30,000	Assumed Useful Life (Yrs.):	10.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$23.03	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$11,515	$11,515	$11,515	$11,515	$11,515	$11,515	$11,515
CASH OUTFLOWS								
2 Equip. Purchase & Salvage	$7,500	$5,310	$5,310	$5,310	$5,310	$5,310	$0	$0
3 x % Utilization	$7,500	$5,310	$5,310	$5,310	$5,310	$5,310	$0	$0
4 Marginal Op. Expenses/Yr.								
5 Technician	$0	$5,125	$5,125	$5,125	$5,125	$5,125	$5,125	$5,125
6 Supplies	$0	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
7 Maintenance	$0	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500
8 Overhead	$0	$110	$110	$110	$110	$110	$110	$110
9 Total Expenses/Yr.	$7,500	$13,045	$13,045	$13,045	$13,045	$13,045	$7,735	$7,735
10 Taxes Before Depreciation	$0	($528)	($528)	($528)	($528)	($528)	$1,304	$1,304
11 Depreciation Tax Shield	$0	($518)	($518)	($518)	($518)	($2,349)	$0	$0
12 Net Cash Outflow/Yr.	$7,500	$11,999	$11,999	$11,999	$11,999	$10,167	$9,039	$9,039
13 NET CASH FLOW	($7,500)	($485)	($485)	($485)	($485)	$1,347	$2,476	$2,476
14 DISCOUNTED CASH FLOW	($7,500)	($441)	($401)	($364)	($331)	$837	$1,399	$1,270
15 PV of Interest Tax Shield	$1,223	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
CASH INFLOWS							
1 Revenue From Test	$11,515	$11,515	$11,515	$0	$0	$0	$0
CASH OUTFLOWS							
2 Equip. purchase & salvage	$0	$0	($3,000)	$0	$0	$0	$0
3 x % utilization	$0	$0	($3,000)	$0	$0	$0	$0
4 Marginal Op. Expenses/Yr.							
5 technician	$5,125	$5,125	$5,125	$0	$0	$0	$0
6 supplies	$1,000	$1,000	$1,000	$0	$0	$0	$0
7 maintenance	$1,500	$1,500	$1,500	$0	$0	$0	$0
8 overhead	$110	$110	$110	$0	$0	$0	$0
9 Total Expenses/Yr.	$7,735	$7,735	$4,735	$0	$0	$0	$0
10 Taxes Before Depreciation	$1,304	$1,304	$2,339	$0	$0	$0	$0
11 Depreciation Tax Shield	$0	$0	$0	$0	$0	$0	$0
12 Net Cash Outflow/Yr.	$9,039	$9,039	$7,074	$0	$0	$0	$0
13 NET CASH FLOW	$2,476	$2,476	$4,441	$0	$0	$0	$0
14 DISCOUNTED CASH FLOW	$1,270	$1,155	$1,883	$0	$0	$0	$0

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$2.00
X		
RESOURCE UNITS/PROCEDURE	1.00	1.00
X		
PROCEDURES/YEAR	500	500
= ANNUAL COST	$5,125	$1,000

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$17.70	$1,500
X		
RESOURCE UNITS/YEAR	5.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$110	$1,500

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	22500.00	1350.00	465.75	438.29
Year 2	18000.00	1080.00	372.60	331.81
Year 3	13500.00	810.00	279.45	234.23
Year 4	9000.00	540.00	186.30	147.57
Year 5	4500.00	270.00	93.15	69.81
SUM				$1,223

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: HOLTER SCANNING

Non-Specialist Low-Cost

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$23.03	500	10.00%	75.00%	100.00%	$30,000	$7,735	10
HIGH ANN. PROCEDURES	$20.88	625	10.00%	75.00%	100.00%	$30,000	$7,735	10
LOW ANN. PROCEDURES	$26.62	375	10.00%	75.00%	100.00%	$30,000	$7,735	10
HIGH COST OF CAPITAL	$23.50	500	12.50%	75.00%	100.00%	$30,000	$7,735	10
LOW COST OF CAPITAL	$22.45	500	7.50%	75.00%	100.00%	$30,000	$7,735	10
LOW % UTILIZATION	$20.17	500	10.00%	75.00%	75.00%	$30,000	$7,735	10
HIGH % UTILIZATION	$23.03	500	10.00%	75.00%	100.00%	$30,000	$7,735	10
HIGH % CAP. BORROWED	$22.33	500	10.00%	93.75%	100.00%	$30,000	$7,735	10
HIGH EQUIP. PRICE	$25.67	500	10.00%	75.00%	100.00%	$37,500	$7,735	10
LOW EQUIP. PRICE	$20.39	500	10.00%	75.00%	100.00%	$22,500	$7,735	10
HIGH OP. EXPENSES	$26.90	500	10.00%	75.00%	100.00%	$30,000	$9,668	10
LOW OP. EXPENSES	$19.15	500	10.00%	75.00%	100.00%	$30,000	$5,801	10
LONG USEFUL LIFE	$22.35	500	10.00%	75.00%	100.00%	$30,000	$7,735	13
SHORT USEFUL LIFE	$24.17	500	10.00%	75.00%	100.00%	$30,000	$7,735	8

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	HOLTER SCANNING	Specialist?	No
CPT-4 Code(s):	93262 (93021)	High-end/Low-end:	High

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	200	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	1.00
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	8.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$2.00
Equipment Purchase Price:	$35,000	Assumed Useful Life (Yrs):	8.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$56.54	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$11,308	$11,308	$11,308	$11,308	$11,308	$11,308	$11,308
CASH OUTFLOWS								
2 Equip. purchase & salvage	$35,000	$0	$0	$0	$0	$0	$0	$0
3 x % utilization	$35,000	$0	$0	$0	$0	$0	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$2,050	$2,050	$2,050	$2,050	$2,050	$2,050	$2,050
6 supplies	$0	$400	$400	$400	$400	$400	$400	$400
7 maintenance	$0	$1,750	$1,750	$1,750	$1,750	$1,750	$1,750	$1,750
8 overhead	$0	$110	$110	$110	$110	$110	$110	$110
9 Total Expenses/Yr.	$35,000	$4,310	$4,310	$4,310	$4,310	$4,310	$4,310	$4,310
10 Taxes Before Depreciation	$0	$2,414	$2,414	$2,414	$2,414	$2,414	$2,414	$2,414
11 Depreciation Tax Shield	$0	($2,415)	($2,415)	($2,415)	($2,415)	($2,415)	$0	$0
12 Net Cash Outflow/Yr.	$35,000	$4,309	$4,309	$4,309	$4,309	$4,309	$6,724	$6,724
13 NET CASH FLOW	($35,000)	$6,999	$6,999	$6,999	$6,999	$6,999	$4,584	$4,584
14 DISCOUNTED CASH FLOW	($35,000)	$6,363	$5,784	$5,258	$4,780	$4,346	$2,588	$2,352
15 PV of Interest Tax Shield	$0 [See next page for calculation]							
16 NET PRESENT VALUE AT 0 (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

		Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
	CASH INFLOWS							
1	Revenue From Test	$11,308	$0	$0	$0	$0	$0	$0
	CASH OUTFLOWS							
2	Equip. purchase & salvage	($3,500)	$0	$0	$0	$0	$0	$0
3	x % utilization	($3,500)	$0	$0	$0	$0	$0	$0
4	Marginal Op. Expenses/Yr.							
5	technician	$2,050	$0	$0	$0	$0	$0	$0
6	supplies	$400	$0	$0	$0	$0	$0	$0
7	maintenance	$1,750	$0	$0	$0	$0	$0	$0
8	overhead	$110	$0	$0	$0	$0	$0	$0
9	Total Expenses/Yr.	$310	$0	$0	$0	$0	$0	$0
10	Taxes Before Depreciation	$3,622	$0	$0	$0	$0	$0	$0
11	Depreciation Tax Shield	$0	$0	$0	$0	$0	$0	$0
12	Net Cash Outflow/Yr.	$4,432	$0	$0	$0	$0	$0	$0
13	NET CASH FLOW	$6,876	$0	$0	$0	$0	$0	$0
14	DISCOUNTED CASH FLOW	$3,529	$0	$0	$0	$0	$0	$0

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$2.00
X		
RESOURCE UNITS/PROCEDURE	1.00	1.00
X		
PROCEDURES/YEAR	200	200
= ANNUAL COST	$2,050	$400

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$1,750
X		
RESOURCE UNITS/YEAR	9.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$110	$1,750

Present value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	HOLTER SCANNING	Specialist?	Yes
CPT-4 Code(s):	93262 (90021)	High-end/Low-end:	Low

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	480	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	1.00
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	8.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$2.00
Equipment Purchase Price:	$50,000	Assumed Useful Life (Yrs):	8.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Technical Component Price:	$36.92	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$14,769	$14,769	$14,769	$14,769	$14,769	$14,769	$14,769
CASH OUTFLOWS								
2 Equip. purchase & salvage	$12,500	$8,850	$8,850	$8,850	$8,850	$8,850	$0	$0
3 x % utilization	$12,500	$8,850	$8,850	$8,850	$8,850	$8,850	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$4,100	$4,100	$4,100	$4,100	$4,100	$4,100	$4,100
6 supplies	$0	$800	$800	$800	$800	$800	$800	$800
7 maintenance	$0	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500
8 overhead	$0	$110	$110	$110	$110	$110	$110	$110
9 Total Expenses/Yr.	$12,500	$16,360	$16,360	$16,360	$16,360	$16,360	$7,510	$7,510
10 Taxes Before Depreciation	$0	($549)	$549)	($549)	($549)	($549)	$2,505	$2,505
11 Depreciation Tax Shield	$0	($863)	($863)	($863)	($863)	($3,916)	$0	$0
12 Net Cash Outflow/Yr.	$12,500	$14,948	$14,948	$14,948	$14,948	$11,895	$10,014	$10,014
13 NET CASH FLOW	($12,500)	($179)	($179)	($179)	($179)	$2,874	$4,755	$4,755
14 DISCOUNTED CASH FLOW	($12,500)	($163)	($148)	($135)	($122)	$1,785	$2,684	$2,440
15 PV of Interest Tax Shield	$2,028 [See next page for calculation]							
16 NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

		Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
	CASH INFLOWS							
1	Revenue From Test	$14,769	$0	$0	$0	$0	$0	$0
	CASH OUTFLOWS							
2	Equip. purchase & salvage	($5,000)	$0	$0	$0	$0	$0	$0
3	x % utilization	($5,000)	$0	$0	$0	$0	$0	$0
4	Marginal Op. Expenses/Yr.							
5	technician	$4,100	$0	$0	$0	$0	$0	$0
6	supplies	$300	$0	$0	$0	$0	$0	$0
7	maintenance	$2,500	$0	$0	$0	$0	$0	$0
8	overhead	$110	$0	$0	$0	$0	$0	$0
9	Total Expenses/Yr.	$2,510	$0	$0	$0	$0	$0	$0
10	Taxes Before Depreciation	$4,230	$0	$0	$0	$0	$0	$0
11	Depreciation Tax Shield	$0	$0	$0	$0	$0	$0	$0
12	Net Cash Outflow/Yr.	$6,739	$0	$0	$0	$0	$0	$0
13	NET CASH FLOW	$8,030	$0	$0	$0	$0	$0	$0
14	DISCOUNTED CASH FLOW	$4,121	$0	$0	$0	$0	$0	$0

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$2.00
X		
RESOURCE UNITS/PROCEDURE	1.00	1.00
X		
PROCEDURES/YEAR	400	400
= ANNUAL COST	$4,100	$800

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$2,500
X		
RESOURCE UNITS/YEAR	8.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$110	$2,500

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	37500.00	2250.00	776.25	732.31
Year 2	30000.00	1800.00	621.00	552.69
Year 3	22500.00	1350.00	465.75	391.05
Year 4	15000.00	900.00	310.50	245.95
Year 5	7500.00	450.00	155.25	116.91
SUM				$2,038

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	HOLTER SCANNING	Specialist?	Yes
CPT-4 Code(s):	93225 (00021)	High-end/Low-end:	High

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	200	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	1.00
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	8.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$2.00
Equipment Purchase Price:	$60,000	Assumed Useful Life (Yrs):	6.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$122.36	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$24,471	$24,471	$24,471	$24,471	$24,471	$24,471	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$60,000	$0	$0	$0	$0	$0	($5,000)	$0
3 x % utilization	$60,000	$0	$0	$0	$0	$0	($5,000)	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$3,208	$3,208	$3,208	$3,208	$3,208	$3,208	$0
6 supplies	$0	$400	$400	$400	$400	$400	$400	$0
7 maintenance	$0	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$0
8 overhead	$0	$110	$110	$110	$110	$110	$110	$0
9 Total Expenses/Yr.	$60,000	$8,718	$8,718	$8,718	$8,718	$8,718	$8,718	$0
10 Taxes Before Depreciation	$0	$5,090	$5,090	$5,090	$5,090	$5,090	$7,160	$0
11 Depreciation Tax Shield	$0	($4,140)	($4,140)	($4,140)	($4,140)	($4,140)	$0	$0
12 Net Cash Outflow/Yr.	$60,000	$10,668	$10,668	$10,668	$10,668	$10,668	$10,878	$0
13 NET CASH FLOW	($60,000)	$13,804	$13,804	$13,804	$13,804	$13,804	$13,594	$0
14 DISCOUNTED CASH FLOW	($60,000)	$12,549	$11,408	$10,371	$9,428	$8,571	$7,673	$0
15 PV of Interest Tax Shield	$0.00	[See next page for calculation]						
16 NET PRESENT VALUE AT 0 (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$2.00
X		
RESOURCE UNITS/PROCEDURE	1.00	1.00
X		
PROCEDURES/YEAR	200	200
= ANNUAL COST	$3,208	$400

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$6,000
X		
RESOURCE UNITS/YEAR	8.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$110	$6,000

Present value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: HOLTER SCANNING

Specialist High-Cost

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$122.36	200	10.00%	0.00%	100.00%	$60,000	$9,718	6
HIGH ANN. PROCEDURES	$101.49	250	10.00%	0.00%	100.00%	$60,000	$9,718	6
LOW ANN. PROCEDURES	$157.13	150	10.00%	0.00%	100.00%	$60,000	$9,718	6
HIGH COST OF CAPITAL	$130.18	200	12.50%	0.00%	100.00%	$60,000	$9,718	6
LOW COST OF CAPITAL	$114.80	200	7.50%	0.00%	100.00%	$60,000	$9,718	6
LOW % UTILIZATION	$96.29	200	10.00%	0.00%	75.00%	$60,000	$9,718	6
HIGH % UTILIZATION	$122.36	200	10.00%	0.00%	100.00%	$60,000	$9,718	6
HIGH % CAP. BORROWED	$115.59	200	10.00%	25.00%	100.00%	$60,000	$9,718	6
HIGH EQUIP. PRICE	$148.30	200	10.00%	0.00%	100.00%	$75,000	$9,718	6
LOW EQUIP. PRICE	$96.42	200	10.00%	0.00%	100.00%	$45,000	$9,718	6
HIGH OP. EXPENSES	$134.50	200	10.00%	0.00%	100.00%	$60,000	$12,147	6
LOW OP. EXPENSES	$110.21	200	10.00%	0.00%	100.00%	$60,000	$7,288	6
LONG USEFUL LIFE	$108.57	200	10.00%	0.00%	100.00%	$60,000	$9,718	8
SHORT USEFUL LIFE	$135.49	200	10.00%	0.00%	100.00%	$60,000	$9,718	5

16. HOLTER SCANNING
NORMAL-RETURN VOLUMES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	HOLTER SCANNING	Specialist?	No
CPT-4 Code(s):	93262 (99021)	High-end/Low-end:	Low

INPUT DATA AND ASSUMPTIONS

Break-Even Procedures/Yr.:	43	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	1.00
Annual Overhead/Square Ft:	$17.70	Required Square Feet:	8.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$2.00
Equipment Purchase Price:	$30,000	Assumed Useful Life (Yrs):	10.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	6%
Medicare Mean Prevailing:	$125.92	Net Present Value:	$274

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$6,044	$6,044	$6,044	$6,044	$6,044	$6,044	$6,044
CASH OUTFLOWS								
2 Equip. purchase & salvage	$7,500	$5,310	$5,310	$5,310	$5,310	$5,310	$0	$0
3 - % utilization	$7,500	$5,310	$5,310	$5,310	$5,310	$5,310	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$492	$492	$492	$492	$492	$492	$492
6 supplies	$0	$96	$96	$96	$96	$96	$96	$96
7 maintenance	$0	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500
8 overhead	$0	$110	$110	$110	$110	$110	$110	$110
9 Total Expenses/Yr.	$7,500	$7,508	$7,508	$7,508	$7,508	$7,508	$2,198	$2,198
10 Taxes Before Depreciation	$0	($505)	($505)	($505)	($505)	($505)	$1,327	$1,327
11 Depreciation Tax Shield	$0	($519)	($518)	($518)	($518)	($2,349)	$0	$0
12 Net Cash Outflow/Yr.	$7,500	$6,485	$6,485	$6,485	$6,485	$4,653	$3,525	$3,525
13 NET CASH FLOW	($7,500)	($441)	($441)	($441)	($441)	$1,391	$2,519	$2,519
14 DISCOUNTED CASH FLOW	($7,500)	($401)	($365)	($331)	($301)	$864	$1,422	$1,293
15 PV of Interest Tax Shield	$1,223	[See next page for calculation]						
16 NET PRESENT VALUE AT 0 (= zero for break-even)	$274							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
CASH INFLOWS							
1 Revenue From Test	$5,944	$8,044	$8,044	$0	$0	$0	$0
CASH OUTFLOWS							
2 Equip. purchase & salvage	$0	$0	($3,000)	$0	$0	$0	$0
3 x % utilization	$0	$0	($3,000)	$0	$0	$0	$0
4 Marginal Op. Expenses/Yr.							
5 technician	$492	$492	$492	$0	$0	$0	$0
6 supplies	$96	$96	$96	$0	$0	$0	$0
7 maintenance	$1,500	$1,500	$1,500	$0	$0	$0	$0
8 overhead	$110	$110	$110	$0	$0	$0	$0
9 Total Expenses/Yr.	$2,198	$2,198	($902)	$0	$0	$0	$0
10 Taxes Before Depreciation	$1,327	$1,327	$2,362	$0	$0	$0	$0
11 Depreciation Tax Shield	$0	$0	$0	$0	$0	$0	$0
12 Net Cash Outflow/Yr.	$3,525	$3,525	$1,560	$0	$0	$0	$0
13 NET CASH FLOW	$2,519	$2,519	$4,484	$0	$0	$0	$0
14 DISCOUNTED CASH FLOW	$1,293	$1,175	$1,902	$0	$0	$0	$0

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$2.00
X		
RESOURCE UNITS/PROCEDURE	1.00	1.00
X		
PROCEDURES/YEAR	48	48
= ANNUAL COST	$492	$96

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.75	$1,500
X		
RESOURCE UNITS/YEAR	8.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$110	$1,500

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	22500.00	1350.00	465.75	439.39
Year 2	18000.00	1080.00	372.60	331.61
Year 3	13500.00	810.00	279.45	234.63
Year 4	9000.00	540.00	186.30	147.57
Year 5	4500.00	270.00	93.15	69.61
SUM				$1,223

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	HOLTER SCANNING	Specialist?	No
CPT-4 Code(s):	93262 (93021)	High-end/Low-end:	High

INPUT DATA AND ASSUMPTIONS

Break-Even Procedures/Yr.:	78	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	1.00
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	8.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$2.00
Equipment Purchase Price:	$35,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	0%
Medicare Mean Prevailing:	$125.92	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$9,813	$9,813	$9,813	$9,813	$9,813	$9,813	$9,813
CASH OUTFLOWS								
2 Equip. purchase & salvage	$35,000	$0	$0	$0	$0	$0	$0	$0
3 x % utilization	$35,000	$0	$0	$0	$0	$0	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$799	$799	$799	$799	$799	$799	$799
6 supplies	$0	$156	$156	$156	$156	$156	$156	$156
7 maintenance	$0	$1,750	$1,750	$1,750	$1,750	$1,750	$1,750	$1,750
8 overhead	$0	$110	$110	$110	$110	$110	$110	$110
9 Total Expenses/Yr.	$35,000	$2,814	$2,814	$2,814	$2,814	$2,814	$2,814	$2,814
10 Taxes Before Depreciation	$0	$2,414	$2,414	$2,414	$2,414	$2,414	$2,414	$2,414
11 Depreciation Tax Shield	$0	($2,415)	($2,415)	($2,415)	($2,415)	($2,415)	$0	$0
12 Net Cash Outflow/Yr.	$35,000	$2,814	$2,814	$2,814	$2,814	$2,814	$5,229	$5,229
13 NET CASH FLOW	($35,000)	$6,999	$6,999	$6,999	$6,999	$6,999	$4,584	$4,584
14 DISCOUNTED CASH FLOW	($35,000)	$6,363	$5,784	$5,258	$4,780	$4,346	$2,588	$2,352
15 PV of Interest Tax Shield	$0	(See next page for calculation)						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

		Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
	CASH INFLOWS							
1	Revenue From Test	$7,813	$0	$0	$0	$0	$0	$0
	CASH OUTFLOWS							
2	Equip. purchase & salvage	($3,500)	$0	$0	$0	$0	$0	$0
3	x % utilization	($3,500)	$0	$0	$0	$0	$0	$0
4	Marginal Op. Expenses/Yr.							
5	technician	$799	$0	$0	$0	$0	$0	$0
6	supplies	$156	$0	$0	$0	$0	$0	$0
7	maintenance	$1,750	$0	$0	$0	$0	$0	$0
8	overhead	$110	$0	$0	$0	$0	$0	$0
9	Total Expenses/Yr.	($686)	$0	$0	$0	$0	$0	$0
10	Taxes Before Depreciation	$3,622	$0	$0	$0	$0	$0	$0
11	Depreciation Tax Shield	$0	$0	$0	$0	$0	$0	$0
12	Net Cash Outflow/Yr.	$2,936	$0	$0	$0	$0	$0	$0
13	NET CASH FLOW	$6,876	$0	$0	$0	$0	$0	$0
14	DISCOUNTED CASH FLOW	$3,529	$0	$0	$0	$0	$0	$0

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$2.00
X		
RESOURCE UNITS/PROCEDURE	1.00	1.00
X		
PROCEDURES/YEAR	77,927	77,927
= ANNUAL COST	$799	$156

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$1,750
X		
RESOURCE UNITS/YEAR	8.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$110	$1,750

Present Value of Interest Tax Shield
(Line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	HOLTER SCANNING	Specialist?	Yes
CPT-4 Code(s):	93262 (90021)	High-end/Low-end:	Low

INPUT DATA AND ASSUMPTIONS

Break-Even Procedures/Yr.:	87	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	1.00
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	8.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$2.00
Equipment Purchase Price:	$20,000	Assumed Useful Life (Yrs):	8.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	75%	Loan Interest Rate:	0%
Medicare Mean Prevailing:	$125.92	Net Present Value:	$70

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$10,955	$10,955	$10,955	$10,955	$10,955	$10,955	$10,955
CASH OUTFLOWS								
2 Equip. Purchase & Salvage	$12,500	$8,850	$8,850	$8,850	$8,850	$8,850	$0	$0
3 % Utilization	$12,500	$8,850	$8,850	$8,850	$8,850	$8,850	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$892	$892	$892	$892	$892	$892	$892
6 supplies	$0	$174	$174	$174	$174	$174	$174	$174
7 maintenance	$0	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500
8 overhead	$0	$110	$110	$110	$110	$110	$110	$110
9 Total Expenses/Yr.	$12,500	$12,525	$12,525	$12,525	$12,525	$12,525	$3,675	$3,675
10 Taxes Before Depreciation	$0	($542)	($542)	($542)	($542)	($542)	$2,511	$2,511
11 Depreciation Tax Shield	$0	($863)	($863)	($863)	($863)	($3,916)	$0	$0
12 Net Cash Outflow/Yr.	$12,500	$11,121	$11,121	$11,121	$11,121	$8,068	$6,187	$6,187
13 NET CASH FLOW	($12,500)	($166)	($166)	($166)	($166)	$2,887	$4,768	$4,768
14 DISCOUNTED CASH FLOW	($12,500)	($151)	($137)	($125)	($113)	$1,793	$2,692	$2,447
15 PV of Interest Tax Shield	$2,038 [See next page for calculation]							
16 NET PRESENT VALUE AT P (= zero for break-even)	$70							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
CASH INFLOWS							
1 Revenue From Test	$10,955	$0	$0	$0	$0	$0	$0
CASH OUTFLOWS							
2 Equip. purchase & salvage	($5,000)	$0	$0	$0	$0	$0	$0
3 x % utilization	($5,000)	$0	$0	$0	$0	$0	$0
4 Marginal Op. Expenses/Yr.							
5 technician	$892	$0	$0	$0	$0	$0	$0
6 supplies	$174	$0	$0	$0	$0	$0	$0
7 maintenance	$2,500	$0	$0	$0	$0	$0	$0
8 overhead	$110	$0	$0	$0	$0	$0	$0
9 Total Expenses/Yr.	($1,325)	$0	$0	$0	$0	$0	$0
10 Taxes Before Depreciation	$4,236	$0	$0	$0	$0	$0	$0
11 Depreciation Tax Shield	$0	$0	$0	$0	$0	$0	$0
12 Net Cash Outflow/Yr.	$2,912	$0	$0	$0	$0	$0	$0
13 NET CASH FLOW	$8,043	$0	$0	$0	$0	$0	$0
14 DISCOUNTED CASH FLOW	$4,127	$0	$0	$0	$0	$0	$0

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$2.00
X		
RESOURCE UNITS/PROCEDURE	1.00	1.00
X		
PROCEDURES/YEAR	87	87
= ANNUAL COST	$892	$174

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$2,500
X		
RESOURCE UNITS/YEAR	8.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$110	$2,500

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	37500.00	2250.00	776.25	732.31
Year 2	30000.00	1800.00	621.00	552.69
Year 3	22500.00	1350.00	465.75	391.05
Year 4	15000.00	900.00	310.50	245.95
Year 5	7500.00	450.00	155.25	116.01
SUM				$2,038

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	HOLTER SCANNING	Specialist?	Yes
CPT-4 Code(s):	93262 (90021)	High-end/Low-end:	High

INPUT DATA AND ASSUMPTIONS

Break-Even Procedures/Yr.:	193	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	1.00
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	8.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$2.00
Equipment Purchase Price:	$60,000	Assumed Useful Life (Yrs):	6.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Medicare Mean Prevailing:	$125.72	Net Present Value:	($121)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$24,303	$24,303	$24,303	$24,303	$24,303	$24,303	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$60,000	$0	$0	$0	$0	$0	($6,000)	$0
3 @ % utilization	$60,000	$0	$0	$0	$0	$0	($6,000)	$0
4 Marginal Oc. Expenses/Yr.								
5 technician	$0	$3,096	$3,096	$3,096	$3,096	$3,096	$3,096	$0
6 supplies	$0	$386	$386	$386	$386	$386	$386	$0
7 maintenance	$0	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$0
8 overhead	$0	$110	$110	$110	$110	$110	$110	$0
9 Total Expenses/Yr.	$60,000	$9,591	$9,591	$9,591	$9,591	$9,591	$3,591	$0
10 Taxes Before Depreciation	$0	$5,075	$5,075	$5,075	$5,075	$5,075	$7,145	$0
11 Depreciation Tax Shield	$0	($4,140)	($4,140)	($4,140)	($4,140)	($4,140)	$0	$0
12 Net Cash Outflow/Yr.	$60,000	$10,527	$10,527	$10,527	$10,527	$10,527	$10,737	$0
13 NET CASH FLOW	($60,000)	$13,776	$13,776	$13,776	$13,776	$13,776	$13,566	$0
14 DISCOUNTED CASH FLOW	($60,000)	$12,524	$11,385	$10,350	$9,409	$8,554	$7,658	$0
15 PV of Interest Tax Shield	$0.00 [See next page for calculation]							
16 NET PRESENT VALUE AT P (= zero for break-even)	($121)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$18.04	$2.00
X		
RESOURCE UNITS/PROCEDURE	1.00	1.00
X		
PROCEDURES/YEAR	193	193
= ANNUAL COST	$3,096	$386

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$6,000
X		
RESOURCE UNITS/YEAR	8.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$110	$6,000

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

17. HOLTER DIGITAL RECORDING

17. HOLTER DIGITAL RECORDING
NORMAL-RETURN PRICES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	HOLT DIGITIAL REC.	Specialist?	No
CPT-4 Code(s):	93262 (00200)	High-end/Low-end:	L

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	150	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	0.50
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	0.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.00
Equipment Purchase Price:	$10,000	Assumed Useful Life (Yrs):	6.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	50%	Loan Interest Rate:	6%
Technical Component Price:	$26.84	Net Present Value:	($0)

1

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$4,026	$4,026	$4,026	$4,026	$4,026	$4,026	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$5,000	$1,180	$1,180	$1,180	$1,180	$1,180	($1,000)	$0
3 x % utilization	$5,000	$1,180	$1,180	$1,180	$1,180	$1,180	($1,000)	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$769	$769	$769	$769	$769	$769	$0
6 supplies	$0	$750	$750	$750	$750	$750	$750	$0
7 maintenance	$0	$500	$500	$500	$500	$500	$500	$0
8 overhead	$0	$0	$0	$0	$0	$0	$0	$0
9 Total Expenses/Yr.	$5,000	$3,199	$3,199	$3,199	$3,199	$3,199	$1,019	$0
10 Taxes Before Depreciation	$0	$286	$286	$286	$286	$286	$1,038	$0
11 Depreciation Tax Shield	$0	($345)	($345)	($345)	($345)	($752)	$0	$0
12 Net Cash Outflow/Yr.	$5,000	$3,139	$3,139	$3,139	$3,139	$2,732	$2,056	$0
13 NET CASH FLOW	($5,000)	$887	$887	$887	$887	$1,294	$1,970	$0
14 DISCOUNTED CASH FLOW	($5,000)	$807	$733	$667	$606	$804	$1,112	$0
15 PV of Interest Tax Shield	$271.73	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$5.00
X		
RESOURCE UNITS/PROCEDURE	0.50	1.00
X		
PROCEDURES/YEAR	150	150
= ANNUAL COST	$769	$750

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$500.00
X		
RESOURCE UNITS/YEAR	0.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$0	$500

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	5000.00	300.00	103.50	97.64
Year 2	4000.00	240.00	82.80	73.69
Year 3	3000.00	180.00	62.10	52.14
Year 4	2000.00	120.00	41.40	32.79
Year 5	1000.00	60.00	20.70	15.47
SUM				$271.73

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: HOLT DIGITIAL REC.

NON-SPECIALIST, LOW COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$26.84	150	10.00%	50.00%	100.00%	$10,000	$2,019	6
HIGH ANN. PROCEDURES	$23.50	187.5	10.00%	50.00%	100.00%	$10,000	$2,019	6
LOW ANN. PROCEDURES	$32.42	112.5	10.00%	50.00%	100.00%	$10,000	$2,019	6
HIGH COST OF CAPITAL	$27.78	150	12.50%	50.00%	100.00%	$10,000	$2,019	6
LOW COST OF CAPITAL	$25.93	150	7.50%	50.00%	100.00%	$10,000	$2,019	6
LOW % UTILIZATION	$22.49	150	10.00%	50.00%	75.00%	$10,000	$2,019	6
HIGH % UTILIZATION	$26.84	150	10.00%	50.00%	100.00%	$10,000	$2,019	6
HIGH % CAP. BORROWED	$26.09	150	10.00%	62.50%	100.00%	$10,000	$2,019	6
HIGH EQUIP. PRICE	$31.02	150	10.00%	50.00%	100.00%	$12,500	$2,019	6
LOW EQUIP. PRICE	$22.67	150	10.00%	50.00%	100.00%	$7,500	$2,019	6
HIGH OP. EXPENSES	$30.21	150	10.00%	50.00%	100.00%	$10,000	$2,523	6
LOW OP. EXPENSES	$23.48	150	10.00%	50.00%	100.00%	$10,000	$1,514	6
LONG USEFUL LIFE	$22.84	150	10.00%	50.00%	100.00%	$10,000	$1,514	8
SHORT USEFUL LIFE	$26.46	150	10.00%	50.00%	100.00%	$10,000	$1,514	5

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	HOLT DIGITIAL REC.	Specialist?	No
CPT-4 Code(s):	93262 (00020)	High-end/Low-end:	High

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	50	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	0.75
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	0.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.00
Equipment Purchase Price:	$12,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$94.20	Net Present Value:	($0)

	1 Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$4,710	$4,710	$4,710	$4,710	$4,710	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$12,000	$0	$0	$0	$0	($1,200)	$0	$0
3 x % utilization	$12,000	$0	$0	$0	$0	($1,200)	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$384	$384	$384	$384	$384	$0	$0
6 supplies	$0	$250	$250	$250	$250	$250	$0	$0
7 maintenance	$0	$600	$600	$600	$600	$600	$0	$0
8 overhead	$0	$0	$0	$0	$0	$0	$0	$0
9 Total Expenses/Yr.	$12,000	$1,234	$1,234	$1,234	$1,234	$34	$0	$0
10 Taxes Before Depreciation	$0	$1,199	$1,199	$1,199	$1,199	$1,613	$0	$0
11 Depreciation Tax Shield	$0	($828)	($828)	($828)	($828)	($414)	$0	$0
12 Net Cash Outflow/Yr.	$12,000	$1,605	$1,605	$1,605	$1,605	$1,233	$0	$0
13 NET CASH FLOW	($12,000)	$3,105	$3,105	$3,105	$3,105	$3,477	$0	$0
14 DISCOUNTED CASH FLOW	($12,000)	$2,822	$2,566	$2,332	$2,120	$2,159	$0	$0

15 PV of Interest Tax Shield $0.00 [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$5.00
X		
RESOURCE UNITS/PROCEDURE	0.75	1.00
X		
PROCEDURES/YEAR	50	50
= ANNUAL COST	$384	$250

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$600.00
X		
RESOURCE UNITS/YEAR	0.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$0	$600

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	HOLT DIGITAL REC.	Specialist?	Yes
CPT-4 Code(s):	93262 (Q0029)	High-end/Low-end:	Lo

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	250	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	0.75
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	0.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.00
Equipment Purchase Price:	$18,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	50%	Loan Interest Rate:	6%
Technical Component Price:	$30.74	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$7,686	$7,686	$7,686	$7,686	$7,686	$7,686	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$9,000	$2,124	$2,124	$2,124	$2,124	$2,124	($1,800)	$0
3 w/ % utilization	$9,000	$2,124	$2,124	$2,124	$2,124	$2,124	($1,800)	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$1,922	$1,922	$1,922	$1,922	$1,922	$1,922	$0
6 supplies	$0	$1,250	$1,250	$1,250	$1,250	$1,250	$1,250	$0
7 maintenance	$0	$900	$900	$900	$900	$900	$900	$0
8 overhead	$0	$0	$0	$0	$0	$0	$0	$0
9 Total Expenses/Yr.	$9,000	$6,196	$6,196	$6,196	$6,196	$6,196	$2,272	$0
10 Taxes Before Depreciation	$0	$514	$514	$514	$514	$514	$1,868	$0
11 Depreciation Tax Shield	$0	($621)	($621)	($621)	($621)	($1,354)	$0	$0
12 Net Cash Outflow/Yr.	$9,000	$6,089	$6,089	$6,089	$6,089	$5,356	$4,140	$0
13 NET CASH FLOW	($9,000)	$1,597	$1,597	$1,597	$1,597	$2,330	$3,546	$0
14 DISCOUNTED CASH FLOW	($9,000)	$1,452	$1,320	$1,200	$1,091	$1,447	$2,002	$0
15 Pv of Interest Tax Shield	$489.12 (See next page for calculation)							
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$5.00
X		
RESOURCE UNITS/PROCEDURE	0.75	1.00
X		
PROCEDURES/YEAR	250	250
= ANNUAL COST	$1,922	$1,250

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$10.70	$900
X		
RESOURCE UNITS/YEAR	0.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$0	$900

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	9000.00	540.00	186.30	175.75
Year 2	7200.00	432.00	149.04	132.65
Year 3	5400.00	324.00	111.78	93.85
Year 4	3600.00	216.00	74.52	59.03
Year 5	1800.00	108.00	37.26	27.84
SUM				$489.12

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology: HOLT DIGITAL REC. Specialist? Yes
CPT-4 Code(s): 93262 (00020) High-end/Low-end: High

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	180	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$16.04	Personnel Time/Procedure:	0.75
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	0.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$5.00
Equipment Purchase Price:	$22,000	Assumed Useful Life (Yrs):	5.00
Assumed % utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$64.85	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$11,638	$11,638	$11,638	$11,638	$11,638	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$22,000	$0	$0	$0	$0	($2,200)	$0	$0
3 x % utilization	$22,000	$0	$0	$0	$0	($2,200)	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$2,165	$2,165	$2,165	$2,165	$2,165	$0	$0
6 supplies	$0	$900	$900	$900	$900	$900	$0	$0
7 maintenance	$0	$2,200	$2,200	$2,200	$2,200	$2,200	$0	$0
8 overhead	$0	$0	$0	$0	$0	$0	$0	$0
9 Total Expenses/Yr.	$22,000	$5,265	$5,265	$5,265	$5,265	$3,065	$0	$0
10 Taxes Before Depreciation	$0	$2,198	$2,198	$2,198	$2,198	$2,957	$0	$0
11 Depreciation Tax Shield	$0	($1,518)	($1,518)	($1,518)	($1,518)	($759)	$0	$0
12 Net Cash Outflow/Yr.	$22,000	$5,946	$5,946	$5,946	$5,946	$5,264	$0	$0
13 NET CASH FLOW	($22,000)	$5,692	$5,692	$5,692	$5,692	$8,374	$0	$0
14 DISCOUNTED CASH FLOW	($22,000)	$5,174	$4,704	$4,276	$3,888	$3,958	$0	$0
15 PV of Interest Tax Shield	$0.00	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$5.00
X		
RESOURCE UNITS/PROCEDURE	0.75	1.00
X		
PROCEDURES/YEAR	180	180
= ANNUAL COST	$2,165	$900

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$2,200
X		
RESOURCE UNITS/YEAR	0.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$0	$2,200

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: HOLT DIGITAL REC.

Specialist High-Cost

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$64.65	180	10.00%	0.00%	100.00%	$22,000	$5,265	5
HIGH ANN. PROCEDURES	$55.12	225	10.00%	0.00%	100.00%	$22,000	$5,265	5
LOW ANN. PROCEDURES	$80.50	135	10.00%	0.00%	100.00%	$22,000	$5,265	5
HIGH COST OF CAPITAL	$67.89	180	12.50%	0.00%	100.00%	$22,000	$5,265	5
LOW COST OF CAPITAL	$61.50	180	7.50%	0.00%	100.00%	$22,000	$5,265	5
LOW % UTILIZATION	$52.79	180	10.00%	0.00%	75.00%	$22,000	$5,265	5
HIGH % UTILIZATION	$64.65	180	10.00%	0.00%	100.00%	$22,000	$5,265	5
HIGH % CAP. BORROWED	$61.49	180	10.00%	25.00%	100.00%	$22,000	$5,265	5
HIGH EQUIP. PRICE	$76.56	180	10.00%	0.00%	100.00%	$27,500	$5,265	5
LOW EQUIP. PRICE	$52.72	180	10.00%	0.00%	100.00%	$16,500	$5,265	5
HIGH OP. EXPENSES	$71.97	180	10.00%	0.00%	100.00%	$22,000	$6,582	5
LOW OP. EXPENSES	$57.31	180	10.00%	0.00%	100.00%	$22,000	$3,949	5
LONG USEFUL LIFE	$59.30	180	10.00%	0.00%	100.00%	$22,000	$5,265	6
SHORT USEFUL	$65.60	180	10.00%	0.00%	100.00%	$22,000	$5,265	4

17. HOLTER DIGITAL RECORDING
NORMAL-RETURN VOLUMES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	MOLT DIGITAL RED.	Specialist:	No
CPT-4 Code:	93020 (00020)	High-end/Low-end:	Low

INPUT DATA AND ASSUMPTIONS

Break-Even Procedures/Yr.:	55	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	0.50
Annual Overhead/Square Ft:	$12.70	Required Square Feet:	0.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.00
Equipment Purchase Price:	$10,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	50%	Loan Interest Rate:	5%
Medicare Mean Prevailing:	$54.55	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$3,079	$3,079	$3,079	$2,079	$2,079	$2,079	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$5,000	$1,180	$1,180	$1,180	$1,180	$1,180	($1,000)	$0
3 x % Utilization	$5,000	$1,180	$1,180	$1,180	$1,180	$1,180	($1,000)	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$289	$289	$289	$289	$289	$289	$0
6 supplies	$0	$282	$282	$282	$282	$282	$282	$0
7 maintenance	$0	$500	$500	$500	$500	$500	$500	$0
8 overhead	$0	$0	$0	$0	$0	$0	$0	$0
9 Total Expenses/Yr.	$5,000	$2,252	$2,252	$2,252	$2,252	$2,252	$72	$0
10 Taxes Before Depreciation	$0	$286	$286	$286	$286	$286	$2,008	$0
11 Depreciation Tax Shield	$0	($345)	($345)	($345)	($345)	($750)	$0	$0
12 Net Cash Outflow/Yr.	$5,000	$2,192	$2,192	$2,192	$2,192	$1,785	$1,109	$0
13 NET CASH FLOW	($5,000)	$887	$887	$887	$887	$1,294	$1,970	$0
14 DISCOUNTED CASH FLOW	($5,000)	$807	$732	$667	$606	$804	$1,115	$0
15 PV of Interest Tax Shield	$271.73	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$5.00
X		
RESOURCE UNITS/PROCEDURE	0.50	1.00
X		
PROCEDURES/YEAR	56.45	56.45
= ANNUAL COST	$289	$282

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$500
X		
RESOURCE UNITS/YEAR	1.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$0	$500

Present Value of Interest Tax Shield
(Line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	5000.00	300.00	103.50	97.64
Year 2	4000.00	240.00	82.80	73.69
Year 3	3000.00	180.00	62.10	52.14
Year 4	2000.00	120.00	41.40	32.79
Year 5	1000.00	60.00	20.70	15.47
SUM				$271.73

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	HOLT DIGITAL REC.	Specialist?	No
CPT-4 Code(s):	93262 (Q0020)	High-end/Low-end:	High

INPUT DATA AND ASSUMPTIONS

Break-Even Procedures/Yr.:	97	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	0.75
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	0.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.00
Equipment Purchase Price:	$12,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Mean Medicare Prevailing:	$54.55	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$5,311	$5,311	$5,311	$5,311	$5,311	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$12,000	$0	$0	$0	$0	($1,200)	$0	$0
3 x % utilization	$12,000	$0	$0	$0	$0	($1,200)	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$748	$748	$748	$748	$748	$0	$0
6 supplies	$0	$487	$487	$487	$487	$487	$0	$0
7 maintenance	$0	$600	$600	$600	$600	$600	$0	$0
8 overhead	$0	$0	$0	$0	$0	$0	$0	$0
9 Total Expenses/Yr.	$12,000	$1,835	$1,835	$1,835	$1,835	$635	$0	$0
10 Taxes Before Depreciation	$0	$1,199	$1,199	$1,199	$1,199	$1,613	$0	$0
11 Depreciation Tax Shield	$0	($828)	($828)	($828)	($828)	($414)	$0	$0
12 Net Cash Outflow/Yr.	$12,000	$2,206	$2,206	$2,206	$2,206	$1,834	$0	$0
13 NET CASH FLOW	($12,000)	$3,105	$3,105	$3,105	$3,105	$3,477	$0	$0
14 DISCOUNTED CASH FLOW	($12,000)	$2,822	$2,566	$2,333	$2,120	$2,159	$0	$0

15 PV of Interest Tax Shield $0.00 [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$5.00
X		
RESOURCE UNITS/PROCEDURE	0.75	1.00
X		
PROCEDURES/YEAR	97.36	97.36
= ANNUAL COST	$748	$487

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$600
X		
RESOURCE UNITS/YEAR	0.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$0	$600

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:HOLT DIGITAL REC. Specialist? Yes
ICD-9 Code(s):93052 (93020) High-end/Low-end: Low

INPUT DATA AND ASSUMPTIONS

Break-Even Procedures/Yr.:	108	Marginal Tax Rate:	34.50%
Hourly Personnel Costs	$10.75	Personnel Time/Procedure:	0.75
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	0.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.00
Equipment Purchase Price:	$18,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	50%	Loan Interest Rate:	8%
Medicare Mean Prevailing:	$54.55	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$5,882	$5,882	$5,882	$5,882	$5,882	$5,882	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$9,000	$2,124	$2,124	$2,124	$2,124	$2,124	($1,800)	$0
3 A * % utilization	$9,000	$2,124	$2,124	$2,124	$2,124	$2,124	($1,800)	$0
4 Marginal Op. Expenses/Yr.								
5 Technician	$0	$829	$829	$829	$829	$829	$829	$0
6 Supplies	$0	$539	$539	$539	$539	$539	$539	$0
7 Maintenance	$0	$900	$900	$900	$900	$900	$900	$0
8 Overhead	$0	$0	$0	$0	$0	$0	$0	$0
9 Total Expenses/Yr.	$9,000	$4,392	$4,392	$4,392	$4,392	$4,392	$468	$0
10 Taxes Before Depreciation	$0	$514	$514	$514	$514	$514	$1,868	$0
11 Depreciation Tax Shield	$0	($621)	($621)	($621)	($621)	($1,354)	$0	$0
12 Net Cash Outflow/Yr.	$9,000	$4,285	$4,285	$4,285	$4,285	$3,552	$2,336	$0
13 NET CASH FLOW	($9,000)	$1,597	$1,597	$1,597	$1,597	$2,330	$3,546	$0
14 DISCOUNTED CASH FLOW	($9,000)	$1,452	$1,320	$1,200	$1,091	$1,447	$2,002	$0

15 PV of Interest Tax Shield $489.12 [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$[illegible]	$5.00
X		
RESOURCE UNITS/PROCEDURE	0.75	1.00
X		
PROCEDURES/YEAR	107.83	107.83
= ANNUAL COST	$[illegible]	$539

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$900
X		
RESOURCE UNITS/YEAR	0.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$0	$900

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	9000.00	540.00	186.30	175.75
Year 2	7200.00	432.00	149.04	132.65
Year 3	5400.00	324.00	111.78	93.85
Year 4	3600.00	216.00	74.52	59.03
Year 5	1800.00	108.00	37.26	27.84
SUM				$489.12

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	HOLT DIGITAL REC.	Specialist?	Yes
CPT-4 Code(s):	93262 (93020)	High-end/Low-end:	High

INPUT DATA AND ASSUMPTIONS

Break-Even Procedures/Yr.:	228	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$18.04	Personnel Time/Procedure:	0.75
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	0.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$5.00
Equipment Purchase Price:	$22,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Medicare Mean Prevailing:	$54.55	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$12,463	$12,463	$12,463	$12,463	$12,463	$0	$0
CASH OUTFLOWS								
1 Equip. purchase & salvage	$22,000	$0	$0	$0	$0	($2,200)	$0	$0
3 x % utilization	$22,000	$0	$0	$0	$0	($2,200)	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$2,748	$2,748	$2,748	$2,748	$2,748	$0	$0
6 supplies	$0	$1,142	$1,142	$1,142	$1,142	$1,142	$0	$0
7 maintenance	$0	$2,200	$2,200	$2,200	$2,200	$2,200	$0	$0
8 overhead	$0	$0	$0	$0	$0	$0	$0	$0
9 Total Expenses/Yr.	$22,000	$6,091	$6,091	$6,091	$6,091	$3,891	$0	$0
10 Taxes Before Depreciation	$0	$2,198	$2,198	$2,198	$2,198	$2,957	$0	$0
11 Depreciation Tax Shield	$0	($1,518)	($1,518)	($1,518)	($1,518)	($759)	$0	$0
12 Net Cash Outflow/Yr.	$22,000	$6,771	$6,771	$6,771	$6,771	$6,089	$0	$0
13 NET CASH FLOW	($22,000)	$5,692	$5,692	$5,692	$5,692	$6,374	$0	$0
14 DISCOUNTED CASH FLOW	($22,000)	$5,174	$4,704	$4,277	$3,888	$3,958	$0	$0
15 PV of Interest Tax Shield	$0.00	(See next page for calculation)						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$16.04	$5.00
X		
RESOURCE UNITS/PROCEDURE	0.75	1.00
X		
PROCEDURES/YEAR	228.47	228.47
= ANNUAL COST	$2,749	$1,142

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$2,200
X		
RESOURCE UNITS/YEAR	0.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$0	$2,200

Present Value of Interest Tax Shield
(Line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

18. HOLTER DIGITAL SCANNING

18. HOLTER DIGITAL SCANNING
NORMAL-RETURN PRICES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	HOLT DIGITAL SCAN	Specialist?	No
CPT-4 Code(s):	93252 (G0021)	High-end/Low-end:	Low

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	500	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$9.50	Personnel Time/Procedure:	0.25
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	7.00
Annual Maintenance %:	2.50%	Supply Cost/Procedure:	$1.00
Equipment Purchase Price:	$500	Assumed Useful Life (Yrs):	7.00
Assumed % Utilization:	25%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$3.48	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$1,742	$1,742	$1,742	$1,742	$1,742	$1,742	$1,742
CASH OUTFLOWS								
2 Equip. purchase & salvage	$500	$0	$0	$0	$0	$0	$0	($50)
3 x % utilization	$125	$0	$0	$0	$0	$0	$0	($13)
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$1,188	$1,188	$1,188	$1,188	$1,188	$1,188	$1,188
6 supplies	$0	$500	$500	$500	$500	$500	$500	$500
7 maintenance	$0	$3	$3	$3	$3	$3	$3	$3
8 overhead	$0	$24	$24	$24	$24	$24	$24	$24
9 Total Expenses/Yr.	$125	$1,715	$1,715	$1,715	$1,715	$1,715	$1,715	$1,702
10 Taxes Before Depreciation	$0	$10	$10	$10	$10	$10	$10	$14
11 Depreciation Tax Shield	$0	($9)	($9)	($9)	($9)	($9)	$0	$0
12 Net Cash Outflow/Yr.	$125	$1,716	$1,716	$1,716	$1,716	$1,716	$1,724	$1,715
13 NET CASH FLOW	($125)	$27	$27	$27	$27	$27	$18	$26
14 DISCOUNTED CASH FLOW	($125)	$24	$22	$20	$18	$17	$10	$13
15 PV of Interest Tax Shield	$0.00 [See next page for calculation]							
16 NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$9.50	$1.00
X		
RESOURCE UNITS/PROCEDURE	0.25	1.00
X		
PROCEDURES/YEAR	500	500
= ANNUAL COST	$1,188	$500

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$13
X		
RESOURCE UNITS/YEAR	7.0	1.0
X		
PERCENTAGE UTILIZATION	25%	25%
= ANNUAL COST	$24	$3

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS:HOLT DIGITAL SCAN
NON-SPECIALIST, LOW COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$3.48	500	10.00%	0.00%	25.00%	$500	$1,715	7
HIGH ANN. PROCEDURES	$3.46	625	10.00%	0.00%	25.00%	$500	$1,715	7
LOW ANN. PROCEDURES	$3.52	375	10.00%	0.00%	25.00%	$500	$1,715	7
HIGH COST OF CAPITAL	$3.49	500	12.50%	0.00%	25.00%	$500	$1,715	7
LOW COST OF CAPITAL	$3.48	500	7.50%	0.00%	25.00%	$500	$1,715	7
LOW % UTILIZATION	$3.46	500	10.00%	0.00%	18.75%	$500	$1,715	7
HIGH % UTILIZATION	$3.51	500	10.00%	0.00%	31.25%	$500	$1,715	7
HIGH % CAP. BORROWED	$3.48	500	10.00%	25.00%	25.00%	$500	$1,715	7
HIGH EQUIP. PRICE	$3.50	500	10.00%	0.00%	25.00%	$625	$1,715	7
LOW EQUIP. PRICE	$3.47	500	10.00%	0.00%	25.00%	$375	$1,715	7
HIGH OP. EXPENSES	$4.36	500	10.00%	0.00%	25.00%	$500	$2,143	7
LOW OP. EXPENSES	$2.85	500	10.00%	0.00%	25.00%	$500	$1,286	7
LONG USEFUL LIFE	$3.48	500	10.00%	0.00%	25.00%	$500	$1,715	9
SHORT USEFUL LIFE	$3.50	500	10.00%	0.00%	25.00%	$500	$1,715	5

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	HOLT DIGITAL SCAN S	Specialist?	No
CPT-4 Code(s):	93262 (Q0021)	High-end/Low-end:	High

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	200	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	0.25
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	7.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$1.50
Equipment Purchase Price:	$2,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	50%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	5%
Technical Component Price:	$5.78	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$1,156	$1,156	$1,156	$1,156	$1,156	$1,156	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$2,000	$0	$0	$0	$0	$0	($200)	$0
3 x % utilization	$1,000	$0	$0	$0	$0	$0	($100)	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$513	$513	$513	$513	$513	$513	$0
6 supplies	$0	$300	$300	$300	$300	$300	$300	$0
7 maintenance	$0	$50	$50	$50	$50	$50	$50	$0
8 overhead	$0	$48	$48	$48	$48	$48	$48	$0
9 Total Expenses/Yr.	$1,000	$910	$910	$910	$910	$910	$810	$0
10 Taxes Before Depreciation	$0	$85	$85	$85	$85	$85	$119	$0
11 Depreciation Tax Shield	$0	($69)	($69)	($69)	($69)	($69)	$0	$0
12 Net Cash Outflow/Yr.	$1,000	$926	$926	$926	$926	$926	$930	$0
13 NET CASH FLOW	($1,000)	$230	$230	$230	$230	$230	$226	$0
14 DISCOUNTED CASH FLOW	($1,000)	$209	$190	$173	$157	$143	$128	$0
15 PV of Interest Tax Shield	$0.00 [See next page for calculation]							
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$1.50
X		
RESOURCE UNITS/PROCEDURE	0.25	1.00
X		
PROCEDURES/YEAR	200	200
= ANNUAL COST	$513	$300

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$100
X		
RESOURCE UNITS/YEAR	7.0	1.0
X		
PERCENTAGE UTILIZATION	50%	50%
= ANNUAL COST	$48	$50

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	HOLT DIGITAL SCAN	Specialist?	Yes
CPT-4 Code(s):	93262 (90021)	High-end/Low-end:	Low

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	400	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	0.25
Annual Overhead/Square Ft:	$12.70	Required Square Feet:	7.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$1.00
Equipment Purchase Price:	$500	Assumed Useful Life (Yrs):	7.00
Assumed % Utilization:	25%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$3.71	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$1,483	$1,483	$1,483	$1,483	$1,483	$1,483	$1,483
CASH OUTFLOWS								
2 Equip. purchase & salvage	$500	$0	$0	$0	$0	$0	$0	($50)
3 x % utilization	$125	$0	$0	$0	$0	$0	$0	($13)
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$1,025	$1,025	$1,025	$1,025	$1,025	$1,025	$1,025
6 supplies	$0	$400	$400	$400	$400	$400	$400	$400
7 maintenance	$0	$6	$6	$6	$6	$6	$6	$6
8 overhead	$0	$24	$24	$24	$24	$24	$24	$24
9 Total Expenses/Yr.	$125	$1,455	$1,455	$1,455	$1,455	$1,455	$1,455	$1,443
10 Taxes Before Depreciation	$0	$10	$10	$10	$10	$10	$10	$14
11 Depreciation Tax Shield	$0	($9)	($9)	($9)	($9)	($9)	$0	$0
12 Net Cash Outflow/Yr.	$125	$1,456	$1,456	$1,456	$1,456	$1,456	$1,465	$1,457
13 NET CASH FLOW	($125)	$27	$27	$27	$27	$27	$18	$26
14 DISCOUNTED CASH FLOW	($125)	$24	$22	$20	$18	$17	$10	$13
15 PV of Interest Tax Shield	$0.00 [See next page for calculation]							
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$1.00
X		
RESOURCE UNITS/PROCEDURE	0.25	1.00
X		
PROCEDURES/YEAR	400	400
= ANNUAL COST	$1,025	$400

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$25
X		
RESOURCE UNITS/YEAR	7.0	1.0
X		
PERCENTAGE UTILIZATION	25%	25%
= ANNUAL COST	$24	$6

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology: HOLT DIGITIAL SCAN Specialist? Yes
CPT-4 Code(s): 93262 (93021) High-end/Low-end: High

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	200	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	0.25
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	7.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$1.50
Equipment Purchase Price:	$5,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$14.28	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$2,857	$2,857	$2,857	$2,857	$2,857	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$5,000	$0	$0	$0	$0	($500)	$0	$0
3 x % utilization	$5,000	$0	$0	$0	$0	($500)	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$513	$513	$513	$513	$513	$0	$0
6 supplies	$0	$300	$300	$300	$300	$300	$0	$0
7 maintenance	$0	$500	$500	$500	$500	$500	$0	$0
8 overhead	$0	$96	$96	$96	$96	$96	$0	$0
9 Total Expenses/Yr.	$5,000	$1,408	$1,408	$1,408	$1,408	$908	$0	$0
10 Taxes Before Depreciation	$0	$500	$500	$500	$500	$672	$0	$0
11 Depreciation Tax Shield	$0	($345)	($345)	($345)	($345)	($173)	$0	$0
12 Net Cash Outflow/Yr.	$5,000	$1,563	$1,563	$1,563	$1,563	$1,408	$0	$0
13 NET CASH FLOW	($5,000)	$1,294	$1,294	$1,294	$1,294	$1,449	$0	$0
14 DISCOUNTED CASH FLOW	($5,000)	$1,176	$1,069	$972	$884	$899	$0	$0
15 PV of Interest Tax Shield	$0.00 [See next page for calculation]							
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$1.50
X		
RESOURCE UNITS/PROCEDURE	0.25	1.00
X		
PROCEDURES/YEAR	200	200
= ANNUAL COST	$513	$300

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$500
X		
RESOURCE UNITS/YEAR	7.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$96	$500

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS:HOLT DIGITAL SCAN

SPECIALIST, HIGH COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$14.28	200	10.00%	0.00%	100.00%	$5,000	$1,408	5
HIGH ANN. PROCEDURES	$12.24	250	10.00%	0.00%	100.00%	$5,000	$1,408	5
LOW ANN. PROCEDURES	$17.64	150	10.00%	0.00%	100.00%	$5,000	$1,408	5
HIGH COST OF CAPITAL	$14.96	200	12.50%	0.00%	100.00%	$5,000	$1,408	5
LOW COST OF CAPITAL	$13.64	200	7.50%	0.00%	100.00%	$5,000	$1,408	5
LOW % UTILIZATION	$11.72	200	10.00%	0.00%	75.00%	$5,000	$1,408	5
HIGH % UTILIZATION	$14.28	200	10.00%	0.00%	100.00%	$5,000	$1,408	5
HIGH % CAP. BORROWED	$13.64	200	10.00%	25.00%	100.00%	$5,000	$1,408	5
HIGH EQUIP. PRICE	$16.71	200	10.00%	0.00%	100.00%	$6,250	$1,408	5
LOW EQUIP. PRICE	$11.86	200	10.00%	0.00%	100.00%	$3,750	$1,408	5
HIGH OP. EXPENSES	$16.05	200	10.00%	0.00%	100.00%	$5,000	$1,761	5
LOW OP. EXPENSES	$12.53	200	10.00%	0.00%	100.00%	$5,000	$1,056	5
LONG USEFUL LIFE	$13.19	200	10.00%	0.00%	100.00%	$5,000	$1,408	8
SHORT USEFUL LIFE	$14.47	200	10.00%	0.00%	100.00%	$5,000	$1,408	4

18. HOLTER DIGITAL SCANNING
NORMAL-RETURN VOLUMES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology/RAD: DIGITAL SCAN — Specialty: —
ICD-9 Code(s): 92050 (92021) — High-end/Low-end: LOW

INPUT DATA AND ASSUMPTIONS

Break-Even Procedures/Yr.:	1	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$9.50	Personnel Time/Procedure:	0.25
Annual Overhead/Square Ft:	$12.70	Required Square Feet:	7.00
Annual Maintenance %:	2.50%	Supply Cost/Procedure:	$1.00
Equipment Purchase Price:	$500	Assumed Useful Life (Yrs):	7.00
Assumed % Utilization:	25%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	5%
Year Medicare Prevailing:	$126.92	Net Present Value:	$21

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$62	$63	$63	$63	$63	$63	$63
CASH OUTFLOWS								
2 Equip. purchase & salvage	$500	$0	$0	$0	$0	$0	$0	($50)
3 X % Utilization	$125	$0	$0	$0	$0	$0	$0	($12)
4 Marginal Op. Expenses/Yr.								
5 Technician	$0	$1	$1	$1	$1	$1	$1	$1
6 Supplies	$0	$1	$1	$1	$1	$1	$1	$1
7 Maintenance	$0	$3	$3	$3	$3	$3	$3	$3
8 Overhead	$0	$24	$24	$24	$24	$24	$24	$24
9 Total Expenses/Yr.	$125	$29	$29	$29	$29	$29	$29	$16
10 Taxes Before Depreciation	$0	$12	$12	$12	$12	$12	$12	$15
11 Depreciation Tax Shield	$0	($9)	($9)	($9)	($9)	($9)	$0	$0
12 Net Cash Outflow/Yr.	$125	$32	$32	$32	$32	$32	$41	$22
13 NET CASH FLOW	($125)	$31	$31	$31	$21	$31	$22	$21
14 DISCOUNTED CASH FLOW	($125)	$28	$26	$23	$21	$19	$13	$15
15 PV of Interest Tax Shield	$0.00	(See next page for calculation)						
16 NET PRESENT VALUE AT P (= zero for break-even)	$21							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Imputation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF FEELAGE	$11.10	$1.00
X		
RESOURCE UNITS/PROCEDURE	0.05	1.00
X		
PROCEDURES/YEAR	0.5	0.5
= ANNUAL COST	$1	$1

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$13
X		
RESOURCE UNITS/YEAR	7.0	1.0
X		
PERCENTAGE UTILIZATION	25%	25%
= ANNUAL COST	$24	$3

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.0%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	TEST DIGITAL SCAN	Specialist?	No
CPT-4 Code(s):	93262(26021)	High-end/Low-end:	High

INPUT DATA AND ASSUMPTIONS

Break-Even Procedures/Yr.:	3	Marginal Tax Rate:	34.00%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	0.25
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	7.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$1.50
Equipment Purchase Price:	$2,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	50%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	5%
Mean Machine Prevailing:	$125.92	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$355	$355	$355	$355	$355	$355	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$2,000	$0	$0	$0	$0	$0	($200)	$0
3 x % utilization	$1,000	$0	$0	$0	$0	$0	($100)	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$7	$7	$7	$7	$7	$7	$0
6 supplies	$0	$4	$4	$4	$4	$4	$4	$0
7 maintenance	$0	$50	$50	$50	$50	$50	$50	$0
8 overhead	$0	$48	$48	$48	$48	$48	$48	$0
9 Total Expenses/Yr.	$1,000	$109	$109	$109	$109	$109	$9	$0
10 Taxes Before Depreciation	$0	$85	$85	$85	$85	$85	$119	$0
11 Depreciation Tax Shield	$0	($69)	($69)	($69)	($69)	($69)	$	$0
12 Net Cash Outflow/Yr.	$1,000	$125	$125	$125	$125	$125	$109	$0
13 NET CASH FLOW	($1,000)	$230	$230	$230	$230	$230	$127	$0
14 DISCOUNTED CASH FLOW	($1,000)	$209	$190	$173	$157	$142	$128	$0
15 PV of Interest Tax Shield	$0.00 [See next page for calculation]							
16 NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$13.25	$1.50
X		
RESOURCE UNITS/PROCEDURE	0.25	1.00
X		
PROCEDURES/YEAR	2,823	2,823
= ANNUAL COST	$7	$4

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$100
X		
RESOURCE UNITS/YEAR	7.0	1.0
X		
PERCENTAGE UTILIZATION	50%	50%
= ANNUAL COST	$48	$50

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	CT DIGITAL SCAN	Specialty?	Yes
CPT-4 Code:	70010 (RADIOL)	High-end/Low-end:	Low

INPUT DATA AND ASSUMPTIONS

Break-Even Procedures/Yr.:	1	Marginal Tax Rate:	34.00%
Hourly Personnel Cost:	$10.25	Personnel Time/Procedure:	0.25
Annual Overhead/Square Ft:	$13.79	Required Square Feet:	7.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$1.00
Equipment Purchase Price:	$500	Assumed Useful Life (Yrs):	7.00
Assumed % Utilization:	25%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Mean Medicare Prevailing:	$126.92	Net Present Value:	$206

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
Revenue From Test	$0	$126	$126	$126	$126	$126	$126	$126
CASH OUTFLOWS								
Equip. purchase & salvage	$500	$0	$0	$0	$0	$0	$0	($50)
% Utilization	$125	$0	$0	$0	$0	$0	$0	($13)
Marginal Op. Expenses/Yr.								
Technician	$0	$3	$3	$3	$3	$3	$3	$3
Supplies	$0	$1	$1	$1	$1	$1	$1	$1
Maintenance	$0	$6	$6	$6	$6	$6	$6	$6
Overhead	$0	$24	$24	$24	$24	$24	$24	$24
Total Expenses/Yr.	$125	$34	$34	$34	$34	$34	$34	$21
Taxes Before Depreciation	$0	$22	$22	$22	$22	$22	$22	$23
Depreciation Tax Shield	$0	($9)	($9)	($9)	($9)	($9)	$0	$0
Net Cash Outflow/Yr.	$125	$57	$57	$57	$57	$57	$56	$57
NET CASH FLOW	($125)	$69	$69	$69	$69	$69	$50	$69
DISCOUNTED CASH FLOW	($125)	$63	$57	$52	$47	$43	$34	$35
PV of Interest Tax Shield	$0.00	(See next page for calculation)						
NET PRESENT VALUE AT P (= zero for break-even)	$206							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$1.00
X		
RESOURCE UNITS/PROCEDURE	0.25	1.00
X		
PROCEDURES/YEAR	1	1
= ANNUAL COST	$2	$1

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$25
X		
RESOURCE UNITS/YEAR	7.0	1.0
X		
PERCENTAGE UTILIZATION	25%	25%
= ANNUAL COST	$24	$5

Present Value of Interest Tax Shield
(Line 11 on Worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.0%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	HOLT DIGITAL SCAN	Specialist?	Yes
CPT-4 Code(s):	93262 (G0021)	High-end/Low-end:	High

INPUT DATA AND ASSUMPTIONS

Break-Even Procedures/Yr.:	17	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	0.25
Annual Overhead/Square Ft:	$12.70	Required Square Feet:	7.00
Annual Maintenance %:	10.00%	Supply Cost/Procedure:	$1.50
Equipment Purchase Price:	$5,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	8%
Mean Medicare Prevailing	$128.92	Net Present Value:	$0

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$2,112	$2,112	$2,112	$2,112	$2,112	$0	$0
CASH OUTFLOWS								
2 Equip. Purchase & Salvage	$5,000	$0	$0	$0	$0	($500)	$0	$0
3 x % Utilization	$5,000	$0	$0	$0	$0	($500)	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$43	$43	$43	$43	$43	$0	$0
6 supplies	$0	$25	$25	$25	$25	$25	$0	$0
7 maintenance	$0	$500	$500	$500	$500	$500	$0	$0
8 overhead	$0	$96	$96	$96	$96	$96	$0	$0
9 Total Expenses/Yr.	$5,000	$664	$664	$664	$664	$164	$0	$0
10 Taxes Before Depreciation	$0	$500	$500	$500	$500	$672	$0	$0
11 Depreciation Tax Shield	$0	($345)	($345)	($345)	($345)	($173)	$0	$0
12 Net Cash Outflow/Yr.	$5,000	$819	$819	$819	$819	$664	$0	$0
13 NET CASH FLOW	($5,000)	$1,294	$1,294	$1,294	$1,294	$1,449	$0	$0
14 DISCOUNTED CASH FLOW	($5,000)	$1,176	$1,069	$972	$884	$899	$0	$0

15 PV of Interest Tax Shield $0.00 [See next page for calculation]

16 NET PRESENT VALUE AT P $0
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.15	$1.50
X		
RESOURCE UNITS/PROCEDURE	0.25	1.00
X		
PROCEDURES/YEAR	16.775	16.775
= ANNUAL COST	$43	$25

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$500
X		
RESOURCE UNITS/YEAR	7.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$96	$500

Present Value of Interest Tax Shield
(Line 11 on Worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

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19. REAL-TIME ANALYSIS

19. REAL-TIME ANALYSIS
NORMAL-RETURN PRICES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	REAL TIME ANALYSIS	Specialist?	No
CPT-4 Code(s):	93266 (Q0028)	High-end/Low-end:	Low

I17 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	150	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	0.50
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	0.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.00
Equipment Purchase Price:	$5,000	Assumed Useful Life (Yrs):	6.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	50%	Loan Interest Rate:	6%
Technical Component Price:	$18.48	Net Present Value:	($0)

	1 Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$2,773	$2,773	$2,773	$2,773	$2,773	$2,773	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$2,500	$590	$590	$590	$590	$590	($500)	$0
3 x % utilization	$2,500	$590	$590	$590	$590	$590	($500)	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$769	$769	$769	$769	$769	$769	$0
6 supplies	$0	$750	$750	$750	$750	$750	$750	$0
7 maintenance	$0	$250	$250	$250	$250	$250	$250	$0
8 overhead	$0	$0	$0	$0	$0	$0	$0	$0
9 Total Expenses/Yr.	$2,500	$2,359	$2,359	$2,359	$2,359	$2,359	$1,269	$0
10 Taxes Before Depreciation	$0	$143	$143	$143	$143	$143	$519	$0
11 Depreciation Tax Shield	$0	($173)	($173)	($173)	($173)	($376)	$0	$0
12 Net Cash Outflow/Yr.	$2,500	$2,329	$2,329	$2,329	$2,329	$2,125	$1,788	$0
13 NET CASH FLOW	($2,500)	$444	$444	$444	$444	$647	$985	$0
14 DISCOUNTED CASH FLOW	($2,500)	$403	$367	$333	$303	$402	$556	$0

15 PV of Interest Tax Shield $135.87 [See next page for calculation]

16 NET PRESENT VALUE AT P ($0)
(= zero for break-even)

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$5.00
X		
RESOURCE UNITS/PROCEDURE	0.50	1.00
X		
PROCEDURES/YEAR	150	150
= ANNUAL COST	$769	$750

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$250.00
X		
RESOURCE UNITS/YEAR	0.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$0	$250

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	2500.00	150.00	51.75	48.82
Year 2	2000.00	120.00	41.40	36.85
Year 3	1500.00	90.00	31.05	26.07
Year 4	1000.00	60.00	20.70	16.40
Year 5	500.00	30.00	10.35	7.73
SUM				$135.87

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: REAL TIME ANALYSIS

NON-SPECIALIST, LOW COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$18.48	150	10.00%	50.00%	100.00%	$5,000	$1,769	6
HIGH ANN. PROCEDUPES	$16.81	187.5	10.00%	50.00%	100.00%	$5,000	$1,769	6
LOW ANN. PROCEDURES	$21.27	112.5	10.00%	50.00%	100.00%	$5,000	$1,769	6
HIGH COST OF CAPITAL	$18.95	150	12.50%	50.00%	100.00%	$5,000	$1,769	6
LOW COST OF CAPITAL	$18.03	150	7.50%	50.00%	100.00%	$5,000	$1,769	6
LOW % UTILIZATION	$16.31	150	10.00%	50.00%	75.00%	$5,000	$1,769	6
HIGH % UTILIZATION	$18.48	150	10.00%	50.00%	100.00%	$5,000	$1,769	6
HIGH % CAP. BORROWED	$18.11	150	10.00%	62.50%	100.00%	$5,000	$1,769	6
HIGH EQUIP. PRICE	$20.57	150	10.00%	50.00%	100.00%	$6,250	$1,769	6
LOW EQUIP. PRICE	$16.40	150	10.00%	50.00%	100.00%	$3,750	$1,769	6
HIGH OP. EXPENSES	$21.43	150	10.00%	50.00%	100.00%	$5,000	$2,211	6
LOW OP. EXPENSES	$15.54	150	10.00%	50.00%	100.00%	$5,000	$1,327	6
LONG USEFUL LIFE	$15.22	150	10.00%	50.00%	100.00%	$5,000	$1,327	8
SHORT USEFUL LIFE	$17.03	150	10.00%	50.00%	100.00%	$5,000	$1,327	5

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	REAL TIME ANALYSIS	Specialist?	No
CPT-4 Code(s):	93266 (Q0028)	High-end/Low-end:	High

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	50	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	0.75
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	0.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.00
Equipment Purchase Price:	$6,500	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$56.84	Net Present Value:	($0)

	1 Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$2,842	$2,842	$2,842	$2,842	$2,842	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$6,500	$0	$0	$0	$0	($650)	$0	$0
3 x % utilization	$6,500	$0	$0	$0	$0	($650)	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$384	$384	$384	$384	$384	$0	$0
6 supplies	$0	$250	$250	$250	$250	$250	$0	$0
7 maintenance	$0	$325	$325	$325	$325	$325	$0	$0
8 overhead	$0	$0	$0	$0	$0	$0	$0	$0
9 Total Expenses/Yr.	$6,500	$959	$959	$959	$959	$309	$0	$0
10 Taxes Before Depreciation	$0	$649	$649	$649	$649	$874	$0	$0
11 Depreciation Tax Shield	$0	($448)	($448)	($448)	($448)	($224)	$0	$0
12 Net Cash Outflow/Yr.	$6,500	$1,160	$1,160	$1,160	$1,160	$959	$0	$0
13 NET CASH FLOW	($6,500)	$1,682	$1,682	$1,682	$1,682	$1,883	$0	$0
14 DISCOUNTED CASH FLOW	($6,500)	$1,529	$1,390	$1,263	$1,149	$1,169	$0	$0
15 PV of Interest Tax Shield	$0.00	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$5.00
X		
RESOURCE UNITS/PROCEDURE	0.75	1.00
X		
PROCEDURES/YEAR	50	50
= ANNUAL COST	$384	$250

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$325.00
X		
RESOURCE UNITS/YEAR	0.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$0	$325

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	REAL TIME ANALYSIS	Specialist?	Yes
CPT-4 Code(s):	93266 (Q002B)	High-end/Low-end:	Low

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	150	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	0.50
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	0.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.00
Equipment Purchase Price:	$8,000	Assumed Useful Life (Yrs):	6.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$25.91	Net Present Value:	($0)

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$3,886	$3,886	$3,886	$3,886	$3,886	$3,886	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$8,000	$0	$0	$0	$0	$0	($800)	$0
3 x % utilization	$8,000	$0	$0	$0	$0	$0	($800)	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$769	$769	$769	$769	$769	$769	$0
6 supplies	$0	$750	$750	$750	$750	$750	$750	$0
7 maintenance	$0	$400	$400	$400	$400	$400	$400	$0
8 overhead	$0	$0	$0	$0	$0	$0	$0	$0
9 Total Expenses/Yr.	$8,000	$1,919	$1,919	$1,919	$1,919	$1,919	$1,119	$0
10 Taxes Before Depreciation	$0	$679	$679	$679	$679	$679	$955	$0
11 Depreciation Tax Shield	$0	($552)	($552)	($552)	($552)	($552)	$0	$0
12 Net Cash Outflow/Yr.	$8,000	$2,045	$2,045	$2,045	$2,045	$2,045	$2,073	$0
13 NET CASH FLOW	($8,000)	$1,840	$1,840	$1,840	$1,840	$1,840	$1,812	$0
14 DISCOUNTED CASH FLOW	($8,000)	$1,673	$1,521	$1,383	$1,257	$1,143	$1,023	$0
15 PV of Interest Tax Shield	$0.00	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$5.00
X		
RESOURCE UNITS/PROCEDURE	0.50	1.00
X		
PROCEDURES/YEAR	150	150
= ANNUAL COST	$769	$750

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$400.00
X		
RESOURCE UNITS/YEAR	0.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$0	$400

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	REAL TIME ANALYSIS	Specialist?	Yes
CPT-4 Code(s):	93266 (Q0028)	High-end/Low-end:	High

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	50	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	0.75
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	0.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.00
Equipment Purchase Price:	$12,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$94.20	Net Present Value:	($0)

	1						
	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$4,710	$4,710	$4,710	$4,710	$4,710	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$12,000	$0	$0	$0	$0	($1,200)	$0	$0
3 x % utilization	$12,000	$0	$0	$0	$0	($1,200)	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$384	$384	$384	$384	$384	$0	$0
6 supplies	$0	$250	$250	$250	$250	$250	$0	$0
7 maintenance	$0	$600	$600	$600	$600	$600	$0	$0
8 overhead	$0	$0	$0	$0	$0	$0	$0	$0
9 Total Expenses/Yr.	$12,000	$1,234	$1,234	$1,234	$1,234	$34	$0	$0
10 Taxes Before Depreciation	$0	$1,199	$1,199	$1,199	$1,199	$1,613	$0	$0
11 Depreciation Tax Shield	$0	($828)	($828)	($828)	($828)	($414)	$0	$0
12 Net Cash Outflow/Yr.	$12,000	$1,605	$1,605	$1,605	$1,605	$1,233	$0	$0
13 NET CASH FLOW	($12,000)	$3,105	$3,105	$3,105	$3,105	$3,477	$0	$0
14 DISCOUNTED CASH FLOW	($12,000)	$2,822	$2,566	$2,332	$2,120	$2,159	$0	$0
15 PV of Interest Tax Shield	$0.00	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN PRICE FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$5.00
X		
RESOURCE UNITS/PROCEDURE	0.75	1.00
X		
PROCEDURES/YEAR	50	50
= ANNUAL COST	$384	$250

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$600.00
X		
RESOURCE UNITS/YEAR	0.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$0	$600

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: REAL TIME ANALYSIS

SPECIALIST, HIGH COST

	BREAK-EVEN PRICE	ANNUAL PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$94.20	50	10.00%	0.00%	100.00%	$12,000	$1,234	5
HIGH ANN. PROCEDURES	$77.90	62.5	10.00%	0.00%	100.00%	$12,000	$1,234	5
LOW ANN. PROCEDURES	$121.37	37.5	10.00%	0.00%	100.00%	$12,000	$1,234	5
HIGH COST OF CAPITAL	$100.55	50	12.50%	0.00%	100.00%	$12,000	$1,234	5
LOW COST OF CAPITAL	$88.02	50	7.50%	0.00%	100.00%	$12,000	$1,234	5
LOW % UTILIZATION	$73.83	50	10.00%	0.00%	75.00%	$12,000	$1,234	5
HIGH % UTILIZATION	$94.20	50	10.00%	0.00%	100.00%	$12,000	$1,234	5
HIGH % CAP. BORROWED	$87.99	50	10.00%	25.00%	100.00%	$12,000	$1,234	5
HIGH EQUIP. PRICE	$114.58	50	10.00%	0.00%	100.00%	$15,000	$1,234	5
LOW EQUIP. PRICE	$73.83	50	10.00%	0.00%	100.00%	$9,000	$1,234	5
HIGH OP. EXPENSES	$100.37	50	10.00%	0.00%	100.00%	$12,000	$1,543	5
LOW OP. EXPENSES	$88.04	50	10.00%	0.00%	100.00%	$12,000	$926	5
LONG USEFUL LIFE	$80.64	50	10.00%	0.00%	100.00%	$12,000	$926	6
SHORT USEFUL LIFE	$89.89	50	10.00%	0.00%	100.00%	$12,000	$926	4

19. REAL-TIME ANALYSIS
NORMAL-RETURN VOLUMES

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	REAL TIME ANALYSIS	Specialist?	No
CPT-4 Code(s):	93266 (Q002B)	High-end/Low-end:	Low

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	16	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	0.50
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	0.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.00
Equipment Purchase Price:	$5,000	Assumed Useful Life (Yrs):	6.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	50%	Loan Interest Rate:	6%
Technical Component Price:	$89.08	Net Present Value:	$0

1

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$1,415	$1,415	$1,415	$1,415	$1,415	$1,415	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$2,500	$590	$590	$590	$590	$590	($500)	$0
3 x % utilization	$2,500	$590	$590	$590	$590	$590	($500)	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$81	$81	$81	$81	$81	$81	$0
6 supplies	$0	$79	$79	$79	$79	$79	$79	$0
7 maintenance	$0	$250	$250	$250	$250	$250	$250	$0
8 overhead	$0	$0	$0	$0	$0	$0	$0	$0
9 Total Expenses/Yr.	$2,500	$1,001	$1,001	$1,001	$1,001	$1,001	($89)	$0
10 Taxes Before Depreciation	$0	$143	$143	$143	$143	$143	$519	$0
11 Depreciation Tax Shield	$0	($173)	($173)	($173)	($173)	($376)	$0	$0
12 Net Cash Outflow/Yr.	$2,500	$971	$971	$971	$971	$768	$430	$0
13 NET CASH FLOW	($2,500)	$444	$444	$444	$444	$647	$985	$0
14 DISCOUNTED CASH FLOW	($2,500)	$403	$367	$333	$303	$402	$556	$0
15 PV of Interest Tax Shield	$135.87	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$5.00
X		
RESOURCE UNITS/PROCEDURE	0.50	1.00
X		
PROCEDURES/YEAR	15,882	15,882
= ANNUAL COST	$81	$79

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$250.00
X		
RESOURCE UNITS/YEAR	0.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$0	$250

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	2500.00	150.00	51.75	48.82
Year 2	2000.00	120.00	41.40	36.85
Year 3	1500.00	90.00	31.05	26.07
Year 4	1000.00	60.00	20.70	16.40
Year 5	500.00	30.00	10.35	7.73
SUM				$135.87

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

SENSITIVITY ANALYSIS: REAL TIME ANALYSIS

NON-SPECIALIST, LOW COST

	BMAD TECH	BREAK EVEN PROCEDURES	COST OF CAPITAL	% CAP. BORROWED	% UTILIZ.	EQUIP. PRICE	ANNUAL OP. EXPS.	USEFUL LIFE
BASE CASE	$89.08	16	10.00%	50.00%	100.00%	$5,000	$534	6
HIGH ANN. PROCEDURES	$89.08	16	10.00%	50.00%	100.00%	$5,000	$534	6
LOW ANN. PROCEDURES	$89.08	16	10.00%	50.00%	100.00%	$5,000	$534	6
HIGH COST OF CAPITAL	$89.08	17	12.50%	50.00%	100.00%	$5,000	$534	6
LOW COST OF CAPITAL	$89.08	15	7.50%	50.00%	100.00%	$5,000	$534	6
LOW % UTILIZATION	$89.08	12	10.00%	50.00%	75.00%	$5,000	$534	6
HIGH % UTILIZATION	$89.08	16	10.00%	50.00%	100.00%	$5,000	$534	6
HIGH % CAP. BORROWED	$89.08	15	10.00%	62.50%	100.00%	$5,000	$534	6
HIGH EQUIP. PRICE	$89.08	20	10.00%	50.00%	100.00%	$6,250	$534	6
LOW EQUIP. PRICE	$89.08	12	10.00%	50.00%	100.00%	$3,750	$534	6
HIGH OP. EXPENSES	$89.08	17	10.00%	50.00%	100.00%	$5,000	$667	6
LOW OP. EXPENSES	$89.08	15	10.00%	50.00%	100.00%	$5,000	$400	6
LONG USEFUL LIFE	$89.08	14	10.00%	50.00%	100.00%	$5,000	$400	8
SHORT USEFUL LIFE	$89.08	17	10.00%	50.00%	100.00%	$5,000	$400	5

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	REAL TIME ANALYSIS	Specialist?	No
CPT-4 Code(s):	93266 (Q0028)	High-end/Low-end:	High

INPUT DATA AND ASSUMPTIONS

Assumed # Procedures/Yr.:	29	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	0.75
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	0.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.00
Equipment Purchase Price:	$6,500	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$89.08	Net Present Value:	$0

	1 Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$2,574	$2,574	$2,574	$2,574	$2,574	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$6,500	$0	$0	$0	$0	($650)	$0	$0
3 x % utilization	$6,500	$0	$0	$0	$0	($650)	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$222	$222	$222	$222	$222	$0	$0
6 supplies	$0	$144	$144	$144	$144	$144	$0	$0
7 maintenance	$0	$325	$325	$325	$325	$325	$0	$0
8 overhead	$0	$0	$0	$0	$0	$0	$0	$0
9 Total Expenses/Yr.	$6,500	$692	$692	$692	$692	$42	$0	$0
10 Taxes Before Depreciation	$0	$650	$650	$650	$650	$874	$0	$0
11 Depreciation Tax Shield	$0	($448)	($448)	($448)	($448)	($224)	$0	$0
12 Net Cash Outflow/Yr.	$6,500	$893	$893	$893	$893	$691	$0	$0
13 NET CASH FLOW	($6,500)	$1,682	$1,682	$1,682	$1,682	$1,883	$0	$0
14 DISCOUNTED CASH FLOW	($6,500)	$1,529	$1,390	$1,263	$1,149	$1,169	$0	$0
15 PV of Interest Tax Shield	$0.00	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	$0							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$5.00
X		
RESOURCE UNITS/PROCEDURE	0.75	1.00
X		
PROCEDURES/YEAR	28.89979	28.89979
= ANNUAL COST	$222	$144

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$325.00
X		
RESOURCE UNITS/YEAR	0.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$0	$325

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Diagnostic Technology:	REAL TIME ANALYSIS	Specialist?	Yes
CPT-4 Code(s):	93266 (Q0028)	High-end/Low-end:	High

117 INPUT DATA AND ASSUMPTIONS 0

Assumed # Procedures/Yr.:	53	Marginal Tax Rate:	34.50%
Hourly Personnel Costs:	$10.25	Personnel Time/Procedure:	0.75
Annual Overhead/Square Ft:	$13.70	Required Square Feet:	0.00
Annual Maintenance %:	5.00%	Supply Cost/Procedure:	$5.00
Equipment Purchase Price:	$12,000	Assumed Useful Life (Yrs):	5.00
Assumed % Utilization:	100%	Assumed Cost of Capital:	10%
Assumed % Capital Borrowed:	0%	Loan Interest Rate:	6%
Technical Component Price:	$89.08	Net Present Value:	($0)

1

	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CASH INFLOWS								
1 Revenue From Test	$0	$4,753	$4,753	$4,753	$4,753	$4,753	$0	$0
CASH OUTFLOWS								
2 Equip. purchase & salvage	$12,000	$0	$0	$0	$0	($1,200)	$0	$0
3 x % utilization	$12,000	$0	$0	$0	$0	($1,200)	$0	$0
4 Marginal Op. Expenses/Yr.								
5 technician	$0	$410	$410	$410	$410	$410	$0	$0
6 supplies	$0	$267	$267	$267	$267	$267	$0	$0
7 maintenance	$0	$600	$600	$600	$600	$600	$0	$0
8 overhead	$0	$0	$0	$0	$0	$0	$0	$0
9 Total Expenses/Yr.	$12,000	$1,277	$1,277	$1,277	$1,277	$77	$0	$0
10 Taxes Before Depreciation	$0	$1,199	$1,199	$1,199	$1,199	$1,613	$0	$0
11 Depreciation Tax Shield	$0	($828)	($828)	($828)	($828)	($414)	$0	$0
12 Net Cash Outflow/Yr.	$12,000	$1,648	$1,648	$1,648	$1,648	$1,276	$0	$0
13 NET CASH FLOW	($12,000)	$3,105	$3,105	$3,105	$3,105	$3,477	$0	$0
14 DISCOUNTED CASH FLOW	($12,000)	$2,822	$2,566	$2,333	$2,120	$2,159	$0	$0
15 PV of Interest Tax Shield	$0.00	[See next page for calculation]						
16 NET PRESENT VALUE AT P (= zero for break-even)	($0)							

INCREMENTAL CASH FLOW ANALYSIS: BREAK-EVEN VOLUME FOR TECHNICAL COMPONENT ONLY

Computation of Annual Operating Expenses

	TECHNICIAN	SUPPLIES
COST/UNIT OF RESOURCE	$10.25	$5.00
X		
RESOURCE UNITS/PROCEDURE	0.75	1.00
X		
PROCEDURES/YEAR	53.35278	53.35278
= ANNUAL COST	$410	$267

	OVERHEAD	MAINTENANCE
COST/UNIT OF RESOURCE	$13.70	$600.00
X		
RESOURCE UNITS/YEAR	0.0	1.0
X		
PERCENTAGE UTILIZATION	100%	100%
= ANNUAL COST	$0	$600

Present Value of Interest Tax Shield
(line 11 on worksheet)

	Debt Year Start	Int	Tax Shield	PV Tax Shield
Year 1	0.00	0.00	0.00	0.00
Year 2	0.00	0.00	0.00	0.00
Year 3	0.00	0.00	0.00	0.00
Year 4	0.00	0.00	0.00	0.00
Year 5	0.00	0.00	0.00	0.00
SUM				$0.00

a. Marginal tax rate is 34.5%
b. Debt principal repaid at year end in equal installments.
c. Interest rate from top of worksheet.
d. Tax shields are discounted at the interest rate of the debt, which assumes they are as risky as the interest payments generating them.

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